TETRA TECH

February 1, 2023

Mr. Justin Barker
Remedial Project Manager
U.S. Environmental Protection Agency, Region 7
11201 Renner Boulevard
Lenexa, Kansas 66219

Subject: **Trip Report Regarding December 2022 Quarterly Sampling – Remedial Systems**
West Highway 6 and Highway 281 Site, Hastings, Nebraska
CERCLIS ID: NEN000704738
U.S. EPA Region 7 START 5, Contract No. 68HE0719D0001
Task Order No. 22F0065
Task Monitor: Justin Barker, Remedial Project Manager

Dear Mr. Barker:

Tetra Tech, Inc. submits the enclosed Trip Report regarding quarterly sampling during December 2022 of the remedial systems at the West Highway 6 and Highway 281 site in Hastings, Nebraska. If you have any questions or comments regarding this submittal, please contact the Project Manager at (816) 412-1754.

Sincerely,

Ted Faile, PG, CHMM
START Project Manager

Enclosures

cc: Angela Puls, Remedial Project Manager

415 Oak Street, Kansas City, MO 64106
Tel 816.412.1741 Fax 816.410.1748 www.tetratech.com

TRIP REPORT
DECEMBER 2022 QUARTERLY SAMPLING – REMEDIAL SYSTEMS
WEST HIGHWAY 6 AND HIGHWAY 281 SITE, HASTINGS, NEBRASKA

CERCLIS ID No. NEN000704738

Superfund Technical Assessment and Response Team (START) 5
Contract No. 68HE0719D0001, Task Order 22F0065

Prepared For:

U.S. Environmental Protection Agency
Region 7
11201 Renner Boulevard
Lenexa, Kansas 66219

February 1, 2023

Prepared By:

Tetra Tech, Inc.
415 Oak Street
Kansas City, Missouri 64106
(816) 412-1741

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APPENDICES

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1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) Region 7 Superfund Division tasked Tetra Tech, Inc. (Tetra Tech), under Superfund Technical Assessment and Response Team (START) 5 Contract No. 68HE0719D0001, Task Order No. 22F0065, to conduct quarterly sampling of the source control measures (soil vapor extraction [SVE] system and groundwater recovery wells) at the West Highway 6 and Highway 281 site (the site) in Hastings, Nebraska. Intent of quarterly sampling during December 2022 was to monitor and evaluate effectiveness of the on-site SVE system and groundwater treatment system.

2.0 SITE LOCATION/DESCRIPTION

The City of Hastings is in Adams County in east-central Nebraska, about 150 miles west of Omaha, Nebraska. The former Dana Corporation facility, the known source of soil and groundwater contamination associated with the site, is at 1900 Summit Avenue in the Hastings West Industrial Park (see Appendix A, Figure 1). Approximate geographic coordinates at the center of the former Dana facility are 40.5712° north latitude and 98.4090° west longitude. Groundwater contamination associated with the site extends east from the former Dana facility along the Highway 6 corridor, to near the intersection of Highway 6 and South Elm, a distance of approximately 2 miles. Land use along the Highway 6 corridor east of the industrial park is primarily commercial and light industrial; however, land use is predominantly residential within one block north and south of the highway.

Topography of the study area is relatively flat, with a slight slope to the east-southeast. Elevation at the former Dana facility is about 1,925 feet above mean sea level (amsl), and elevation at Municipal Well #14 (about 1 mile east) is approximately 1,905 feet amsl. The nearest named surface water feature is Pawnee Creek. The nearest banks of this creek are about 0.5 mile south of Highway 6 (U.S. Geological Survey [USGS] 1974, photorevised 1983).

Regional geology of Adams County consists of unconsolidated Pleistocene and semi-consolidated Pliocene deposits, ranging from 100 to 500 feet in thickness. These deposits consist of clay, silt, sand, and gravel. Locally, thickness of these deposits is estimated at approximately 240 feet. The unconsolidated deposits consist of Pleistocene loess, sand, and gravel. The loess deposits consist of occasional sandy silts and clays, and are as much as 70 feet thick. The Pleistocene sands and gravels occur below the loess units and range in thickness from 130 to 180 feet. These are stream-deposited sands and gravels containing thin, regionally discontinuous layers of clay and silt. Gravel beds within this unit can be as thick as 10 feet. The groundwater surface or static water level usually occurs within this unit. A contractor investigating the site for the Dana Corporation described a continuous silty clay layer across the Dana property of 3 to 5 feet in thickness within the Pleistocene sands, and gravels at elevation 1,800 feet amsl (depth of 115 to 122 feet below ground surface [bgs]) (Environmental Resource Management [ERM]) 2002). Other subsurface studies have indicated that this clay layer may be absent within portions of the study area (U.S. Army Corps of Engineers [USACE] 1990). Depth to groundwater across the County ranges from about 100 to 150 feet bgs, and the water table slopes to the east-southeast at a gradient of 0.0002 foot per linear foot. Depth to groundwater ranges from 99 to 112 feet bgs in monitoring wells at or near the former Dana facility. Differences in water levels are primarily attributable to differences in topographic elevation.

3.0 SITE HISTORY/INVESTIGATIONS

In 1997, a groundwater sample from the City of Hastings Municipal Well #13 (about 750 feet southeast of the site) was found to contain tetrachloroethene (PCE) at a reported concentration of 17 micrograms per liter (µg/L); the well was subsequently shut down. Since that time, groundwater contamination (specifically PCE) has been documented in the site area that encompasses portions of Sections 13, 14, 23, and 24 of Township 7 North, Range 10 West, and Sections 17, 18, 19, and 20 of Township 7 North, Range 9 West, in Adams County, Nebraska.

Past investigations of the site, including a Preliminary Assessment and Site Inspection (PA/SI) completed by the Nebraska Department of Environmental Quality (NDEQ) in 2005, have identified the former Dana Corporation at 1900 Summit Avenue as a source of the PCE in groundwater. The Dana Corporation had manufactured a variety of cast piston rings at the Hastings facility. By use of PCE and 1,1,1-trichloroethane (TCA) as degreasing fluids, piston rings were cleaned within four vapor degreasing units after the piston rings had undergone various wet machining operations. The degreasers were housed in concrete pits, and Dana acknowledged that one of the degreasers had been found leaking in 1988, and that occasional overfilling of the units had resulted in spilled virgin product (EPA 2005). Results from soil and groundwater samples collected near the concrete pit that housed the "Phillips" degreaser confirmed that PCE had been released to the environment. PCE concentrations as high as 9,170,000 micrograms per kilogram (µg/kg) were detected in soil samples collected within that area, and groundwater concentrations as high as 74,600 µg/L have been reported in a monitoring well near the degreaser pit. Dana has since ceased operations at the 1900 Summit address, and the facility is now occupied by Hastings Equity Manufacturing (HEM), which focuses primarily on manufacture of steel and polyethylene stock tanks. Based on findings of past investigations, the site was placed on the EPA National Priorities List (NPL) in 2005 under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) identification number NEN000704738.

Because of the contaminated soil and groundwater, the Dana Corporation initiated some source control measures, including installation of an SVE system (six extraction wells) and four groundwater recovery wells.

In addition to contamination found at Municipal Well #13, other contaminated public and private wells have been identified downgradient of the Dana facility. In 2004, Municipal Well #14, approximately 1 mile east-southeast of the former Dana facility, was found to contain PCE at 7.3 µg/L and trichloroethene (TCE) at 1.3 µg/L. The detected concentration of PCE exceeded the maximum contaminant level (MCL) of 5.0 µg/L. A sample collected from this well in May 2006 contained PCE at

32 µg/L and TCE at 0.87 µg/L. Other impacted, privately owned wells along the Highway 6 corridor have been taken out of operation, and the associated residences/businesses have been connected to the municipal water system.

On-site Remedial Systems

Remedial systems currently present at the site include a groundwater recovery system and an SVE system. The groundwater recovery system consists of four groundwater recovery wells: RW-1, RW-2, RW-3, and RW-4. Groundwater is pumped from each well and piped to a treatment building, where it is treated via a ShallowTray® low-profile air stripper. The air stripper operates as a forced draft system, and consists of five stainless steel stripper trays and a sump tank, forced draft blower, and a 5-horsepower (HP) centrifugal discharge pump. The system is designed to operate at flow rates as high as 75 gallons per minute (gpm). Recovery well RW-1 typically discharges at about 3 gpm, and RW-2 discharge varies from approximately 3 to 4 gpm. The pipes from RW-3 and RW-4 are joined via a manifold outside the treatment building. Combined flow from these two wells is approximately 10 to 12 gpm. Total discharge from the system varies from approximately 16 to 18 gpm. Treated water is discharged to an on-site surface impoundment (pond).

The SVE system consists of four vapor extraction wells (SVE-1, SVE-2, SVE-3, and SVE-4) that penetrate the floor near the former Phillips vapor degreaser on the south side of the HEM building, and two vapor extraction wells (SVE-5 and SVE-6) that penetrate the floor near the former northern vapor degreasers along the west wall of the HEM building. Vacuum to the wells is applied via a positive displacement blower (Sutorbilt 4L-RHC) powered by a 20-HP motor. The blower is sized to provide up to 400 cubic feet per minute (cfm) of process air. Piping for the individual wells and combined effluent is equipped with sample ports, pressure indicators, and differential pressure gauges for sampling and flow calculations. Soil vapor from extraction wells SVE-5 and SVE-6 is combined via a manifold before entering the equipment building. Therefore, collection of separate samples from these two wells necessitates use of sample ports at the individual well heads inside the HEM building (west wall).

In the original operation, vapors from the six SVE wells were combined to pass through a catalytic oxidation (catox) unit and scrubber for treatment of the contaminated vapors. However, contaminant levels in the vapor stream subsequently decreased such that treatment of the vapors is no longer required (in accordance with state air regulations) prior to discharge.

4.0 SITE ACTIVITIES

To monitor and evaluate effectiveness of the remedial systems, START member Ted Faile conducted quarterly sampling activities at the site on December 5-6, 2022, collecting soil vapor samples from the SVE system and water samples from the groundwater recovery wells.

4.1 GROUNDWATER RECOVERY SYSTEM SAMPLING

All four groundwater recovery wells at the site were sampled to determine current concentrations of contaminants in those wells. Table 1 below summarizes the groundwater recovery well samples. Figure 2 in Appendix A shows locations of the groundwater recovery wells.

Each recovery well is plumbed to the equipment building on the site property. Samples were collected from dedicated spigots within the equipment building. Samples for volatile organic compounds (VOC) analysis were collected in either two or four 40-milliliter (mL) volatile organic analysis (VOA) vials (depending on required detection limits), and were preserved with hydrochloric acid (HCl) to pH<2. Each vial was filled so that no head space remained. Pipes from the individual groundwater recovery wells are manifolded together in the equipment building, and the combined influent is then routed to a groundwater treatment unit (air stripper) for mass removal of VOCs. To evaluate effectiveness of the air stripper, combined influent and combined effluent samples were also collected during the sampling activities. Samples for analyses were submitted to the EPA Region 7 laboratory in Kansas City, Kansas.

4.2 SVE SYSTEM – SOIL VAPOR SAMPLING

Eight soil vapor samples were collected from the SVE system to determine VOC removal rates associated with the system. Samples were collected from each of the individual well sample ports (SVE-1 through SVE-4 inside the equipment building, and SVE-5 and SVE-6 at the individual wells heads inside the HEM building), from the system's combined effluent sample port inside the equipment building, and from the combined SVE-5/SVE-6 sample port inside the equipment building.

A sample from the combined SVE-5/SVE-6 sample port inside the equipment building is generally not collected during quarterly sampling events because samples from each individual well are collected at the well heads inside the HEM building. However, due to recent concentration spikes in PCE (and other compounds) in both SVE-5 and SVE-6 since March 2022, a sample from the combined wells was collected for comparative purposes to determine whether the spikes may be related to air quality inside the HEM building. A previous spike in PCE concentrations occurred in SVE-6 (but not SVE-5) between

February 2017 and May 2019. Because the current spikes involve both wells, and have been reported at very similar (and in some cases identical) concentrations, an indoor air source may be a possible cause.

Figure 3 in Appendix A shows SVE well locations. Sample collection (grab sampling) occurred after connection of a Summa canister to a dedicated sample port for each extraction well (or the system effluent). Samples were submitted to the EPA Region 7 laboratory for analysis for VOCs.

Field sheets completed for each sample included the following information: sample time, exact sample location, Summa canister numbers (SVE only), start/stop vacuum readings (SVE only), and analyses to be performed. Table 1 below summarizes samples collected from the SVE and groundwater recovery systems.

TABLE 1

RECOVERY AND SVE WELL SAMPLE SUMMARY – DECEMBER 2022
WEST HIGHWAY 6 AND HIGHWAY 281 SITE, HASTINGS, NEBRASKA

Sample ID	Sample Location
2200046-08	Recovery Well RW-1
2200046-09	Recovery Well RW-2
2200046-10	Recovery Well RW-3
2200046-11	Recovery Well RW-4
2200046-12	Air Stripper Combined Influent
2200046-13	Air Stripper Combined Effluent
2200046-01	SVE-1
2200046-02	SVE-2
2200046-03	SVE-3
2200046-04	SVE-4
2200046-05	SVE-5 (at wellhead)
2200046-06	SVE-6 (at wellhead)
2200046-07	SVE-Combined Effluent
2200046-15	Combined SVE-5/SVE-6 (in equipment building)

Notes:

All samples were collected on December 5-6, 2022.

ID Identification
RW Recovery well
SVE Soil vapor extraction

5.0 ANALYTICAL RESULTS

The samples were analyzed at the EPA Region 7 laboratory under Work Order (WO) number 2200046. A copy of the complete laboratory data package for WO 2200046, including the chain-of-custody record, is in Appendix B.

5.1 GROUNDWATER RECOVERY SYSTEM SAMPLE RESULTS

All four recovery wells sampled contained PCE at concentrations ranging from 1.1 µg/L in RW-4 to 1,300 µg/L in RW-1. The combined influent sample (collected prior to the air stripper) contained PCE at 360 µg/L. The combined effluent did not contain PCE at or above the laboratory reporting limit of 1.0 µg/L. Table 2 summarizes recovery well sample results for PCE. Figure 2 in Appendix A shows recovery well locations and corresponding PCE results. Table C-1 in Appendix C lists historical concentrations of PCE and other VOCs associated with the groundwater recovery system. PCE mass removal data from the groundwater recovery system are in Appendix D.

TABLE 2

GROUNDWATER RECOVERY WELL ANALYTICAL RESULTS – DECEMBER 2022
WEST HIGHWAY 6 AND HIGHWAY 281 SITE, HASTINGS, NEBRASKA

Sample ID	Sample Location	PCE Result (µg/L)
2200046-08	Recovery Well RW-1	1,300
2200046-09	Recovery Well RW-2	5.2 J
2200046-10	Recovery Well RW-3	10
2200046-11	Recovery Well RW-4	1.1
2200046-12	Air Stripper Combined Influent	360
2200046-13	Air Stripper Combined Effluent	1.0 U

Notes:

All water samples were collected on December 6, 2022.

ID Identification
J The identification of the analyte is acceptable; the reported value is an estimate.
PCE Tetrachloroethene
RW Recovery Well
U Analyte was not detected at a concentration equal to or above the reporting limit
µg/L Micrograms per liter

5.2 SVE SYSTEM SAMPLE RESULTS

Eight soil vapor samples were collected from the SVE system (including the combined effluent) for analysis for VOCs. PCE concentrations in the SVE wells sampled ranged from 38 micrograms per cubic meter (µg/m^3) in SVE-2 to 9,800 µg/m^3 in SVE-5. The combined effluent sample contained PCE at 610 µg/m^3. Table 3 summarizes SVE soil vapor sample results for PCE.

TABLE 3

SVE SYSTEM ANALYTICAL RESULTS – DECEMBER 2022
WEST HIGHWAY 6 AND HIGHWAY 281 SITE, HASTINGS, NEBRASKA

Sample ID	Sample Location	PCE Result (µg/m^3)
2200046-01	SVE-1	130
2200046-02	SVE-2	38
2200046-03	SVE-3	510
2200046-04	SVE-4	43
2200046-05	SVE-5 (at wellhead)	9,800
2200046-06	SVE-6 (at wellhead)	8,000
2200046-07	SVE-Combined Effluent	610
2200046-15	SVE-5/SVE-6 (in equipment building)	910

Notes:

All air samples were collected on December 5, 2022.

ID Identification
PCE Tetrachloroethene
SVE Soil vapor extraction
µg/m^3 Micrograms per cubic meter

Other VOCs frequently are detected in the SVE samples. Table 4 below lists the highest levels of these other compounds reported during the sampling event.

TABLE 4

ADDITIONAL VOLATILE ORGANIC COMPOUNDS IN SVE SAMPLES – DECEMBER 2022
WEST HIGHWAY 6 AND HIGHWAY 281 SITE, HASTINGS, NEBRASKA

Analyte	Location of Highest Detected Concentration	Highest Detected Concentration (µg/m^3)
Acetone	SVE-4	52
Benzene	SVE-2	26
2-Butanone	SVE-6	17
Carbon Disulfide	-	ND
Carbon Tetrachloride	SVE-5/6 Combined	21
Chloroethane	-	ND
Chloroform	SVE-6	2.6
Chloromethane	SVE-1	2.4
Cyclohexane	SVE-5	1.4
Dichlorodifluoromethane	SVE-5/6 Combined	11
1,1-Dichloroethane	-	ND
1,1-Dichloroethene	SVE-5/6 Combined	26
1,2-Dichloroethane	SVE-5	0.89
Cis-1,2-Dichloroethene	SVE-3	0.55
1,4-Dioxane	SVE-6	6.8
Ethyl Acetate	-	ND
Ethyl Benzene	SVE-5	1.3
4-Ethyltoluene	-	ND
Heptane	-	ND
Hexane	SVE-6	0.73
2-Hexanone	-	ND
4-Methyl-2-Pentanone	-	ND
2-Propanol	SVE-2	1.5
Propene	-	ND
Tetrahydrofuran	SVE-6	5.0
Toluene	SVE-2	0.92
1,1,1-Trichloroethane	SVE-5	58
Trichloroethene (TCE)	SVE-5	7.3
Trichlorofluoromethane	SVE-3/SVE-5/6 Combined/Effluent	1.7
1,2,4-Trimethylbenzene	SVE-1	1.0
1,3,5-Trimethylbenzene	-	ND
2,2,4-Trimethylpentane	-	ND
Vinyl Acetate	SVE-5/6 Combined	3.7
Vinyl Chloride	-	ND
m- and/or p-Xylene	-	ND
o-Xylene	-	ND

Notes:

ND Analyte was not detected at a concentration equal to or above the reporting limit
SVE Soil vapor extraction
µg/m^3 Micrograms per cubic meter

Notably, the highest concentration of benzene (26 µg/m^3 in SVE-2) is relatively high, as it has been in this well since March 2022. Prior to March 2022, benzene levels among all SVE wells typically ranged between less than 1.0 to 8.0 µg/m^3; however, in the four 2022 quarterly sampling events (March, June, September and December) concentrations in SVE-2 have ranged from 26 µg/m^3 to 42 J µg/m^3 (J denotes an estimated concentration). Benzene was not detected in any groundwater recovery well sample during 2022. Maximum levels of 2-butanone and tetrahydrofuran were all considerably lower than the historically high concentrations reported in June and September 2022, though the highest concentrations of these compounds in June, September and December were reported in the same well, SVE-6. The anomalous variations of these three compounds are not well understood, but may be attributable to a fluctuating water table beneath the building.

Also of note is that the highest detected concentrations of PCE occurred in SVE-5 and SVE-6, a trend which has been consistent during all quarterly sampling events beginning in March 2022. These two wells are along the west wall of the HEM building near the former northern vapor degreasers. A similar trend in PCE concentrations occurred in nine consecutive quarterly sampling events between February 2017 and May 2019. However, during this trend the high levels of PCE were reported only in SVE-6. SVE-6 is screened from approximately 64 to 144 feet bgs, while SVE-5 is screened from approximately 15 to 45 feet bgs.

The analytes reported in SVE-5 and SVE-6 are likely associated with the former vapor degreasers. However, potential indoor sources of VOCs associated with current facility operations have been noted in this area of the building during prior sampling events. Therefore, during the December 2022 sampling event, START collected SVE samples from the wellheads at SVE-5 and SVE-6 (located inside the HEM building) as well as from the combined SVE-5/SVE-6 sample port inside the remedial equipment building. A comparison of the data from these sample locations indicates detections of similar compounds from both locations; however, with respect to compounds likely attributable to former degreaser operations (such as 1,1,1-TCA, 1,4-dioxane, TCE, and PCE), the concentrations from the individual sample ports in the HEM building are generally much higher than those reported from the combined sample port in the remedial equipment building. The reason for this may be related to dilution, as the combined sample port is tapped into a 4-inch pipe containing vapors from both wells, while the individual sample ports at the wellheads are tapped into a 2-inch pipe. Further, the piping run from the wellheads in the HEM building to the combined sample port in the remedial equipment building is about 440 feet, and loss of VOCs could be expected over this distance. It should also be noted that Summa canisters used to collect samples from SVE sample ports are never opened until fully connected to the sample port at the well head.

All analytes not discussed above either were not detected or were present at typical concentrations based on historical data from the SVE system. Figure 3 in Appendix A shows SVE well locations and corresponding PCE results. Table C-2 in Appendix C lists historical PCE concentrations associated with the SVE system. PCE mass removal data from the SVE system are in Appendix E.

6.0 SUMMARY

On December 5-6, 2022, START conducted quarterly sampling of remedial systems at the West Highway 6 and Highway 281 site. Eight samples associated with the SVE system were collected—seven from the wells and one of combined effluent from the system. PCE concentrations in the SVE wells sampled ranged from 38 µg/m^3 in SVE-2 to 9,800 µg/m^3 in SVE-5. The combined effluent sample contained PCE at 610 µg/m^3.

Six samples associated with the groundwater recovery system were collected, including samples from the system's four recovery wells, combined influent (pre-treatment), and combined effluent (post-treatment). All four recovery wells sampled contained PCE at concentrations ranging from 1.1 µg/L in RW-4 to 1,300 µg/L in RW-1. The combined influent sample (collected prior to the air stripper) contained PCE at 360 µg/L. The combined effluent did not contain PCE at or above the laboratory reporting limit of 1.0 µg/L, indicating that the air stripper is effectively removing this contaminant prior to discharge.

7.0 REFERENCES

Environmental Resource Management (ERM). 2002. Phase III Site Characterization Report. Dana Corporation, Perfect Circle Division, Hastings, Nebraska. May 8.

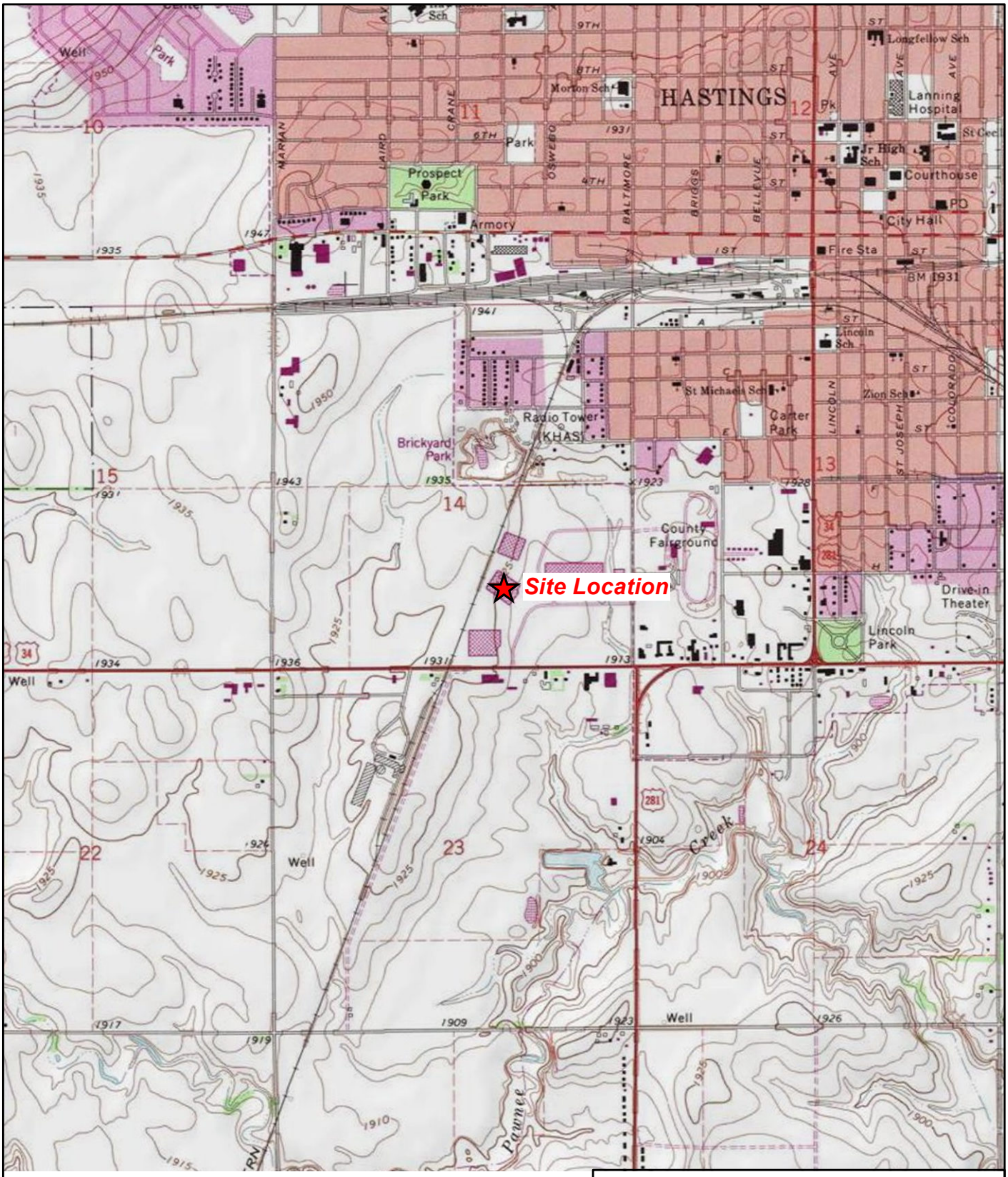
U.S. Army Corps of Engineers (USACE). 1990. Final Ground Water Modeling Report, Hastings East Industrial Park, Remedial Investigation/Feasibility Study, Hastings, Nebraska. Woodward-Clyde Consultants, Overland Park, Kansas. August.

U.S. Environmental Protection Agency (EPA). 2005. Request for Information Pursuant to Section 104 of CERCLA, Dana Corporation Site, Hastings, Nebraska. February 11.

U.S. Geological Survey (USGS). 1974. Hastings West Quadrangle Nebraska-Adams County. 7.5-Minute Topographic Map Series. Scale 1:24,000. Photorevised 1983.

APPENDIX A

FIGURES



Source: USGS Hastings West, Nebraska 7.5 Minute Topo Quad, 1983

West Highway 6 and Highway 281 Site
Hastings, Nebraska

Figure 1
Site Location Map

TETRA TECH

Date: 8/5/2022 Drawn By: Nick Wiederholt Project No: X903022F0065.000

X:\G\903\022F0065\000\Projects\mxd\Figure1.mxd

Legend

- Influent / effluent sample location
- Recovery well location
- Railroad
- Street
- CE — Air stripper combined effluent
- CI — Air stripper combined influent
- 10 — PCE result (µg/L)

RW	Recovery well
12/6/22	Sample date
PCE	Tetrachloroethene
µg/L	Micrograms per liter
U	Analyte was not detected at or above the reporting limit.
J	Estimated concentration

Source: Google Earth Rectified Imagery, 2009; HSIP Gold, 2007; Adams County Mapping, 2009.

West Highway 6 and Highway 281 Site
Hastings, Nebraska

Figure 2
Tetrachloroethene Results from Groundwater Recovery Wells
December 2022

TETRA TECH

Date: 1/31/2023 Drawn By: Nick Wiederholt Project No: X903022F0065.000

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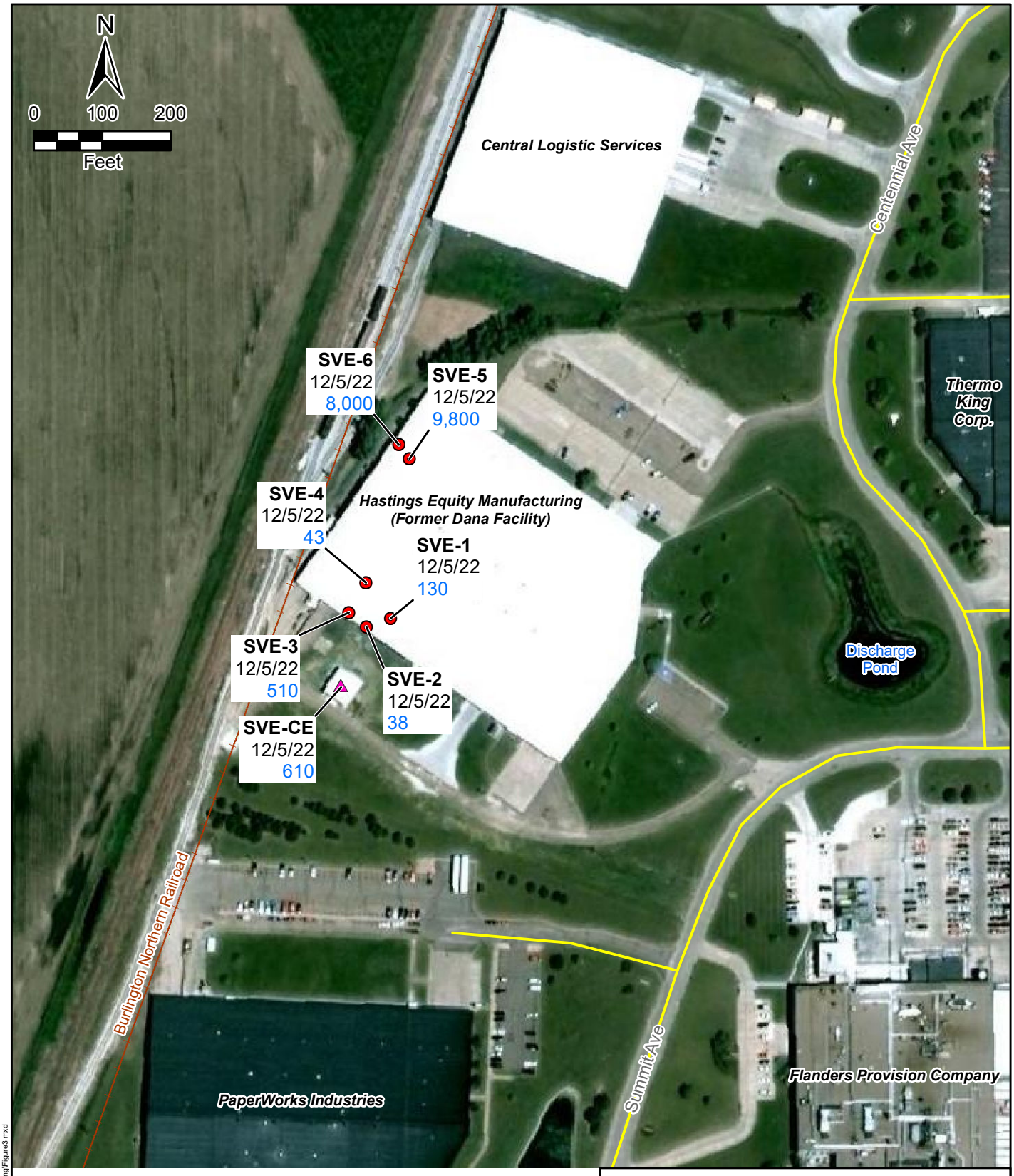

Legend

- Influent / effluent sample location
- Soil vapor extraction well location
- Railroad
- Street
- CE SVE combined effluent
- 43 PCE result (µg/m^3)
- 12/5/22 Sample date

SVE Soil vapor extraction
PCE Tetrachloroethene
µg/m^3 Micrograms per cubic meter

Source: Google Earth Rectified Imagery, 2009; HSIP Gold, 2007; Adams County Mapping, 2009.

West Highway 6 and Highway 281 Site
Hastings, Nebraska

Figure 3
Tetrachloroethene Results from
Soil Vapor Extraction Wells
December 2022

TETRA TECH

Date: 1/31/2023 Drawn By: Nick Wiederholt Project No: X903022F0065.000

X:\G\903\022F0065\000\Projects\mxd\013123_DecSampling\Figure3.mxd

APPENDIX B

EPA REGION 7 ANALYTICAL DATA PACKAGE FOR WO #2200046

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue
Kansas City, KS 66101

Date: 01/05/2023

Subject: Transmittal of Sample Analysis Results for WO#: **2200046**
Project ID: SKA76N00
Project: West Highway 6 and Highway 281

From: Samuel R. Porter, Acting Chief
FOR Laboratory Technology & Analysis Branch
Laboratory Services and Applied Sciences Division

To: Sharon Kennedy
R7 Superfund and Emergency Management
SEMD/AERR/RREP

Enclosed are the analytical data for the above-referenced Work Order[s] (WO) and Project. These results are based on samples as received at the Science and Technology Center. The Regional Laboratory has reviewed and verified the results in accordance with procedures described in our Quality Manual (QM). In addition to all of the analytical results, this transmittal contains pertinent information that may have influenced the reported results and documents any deviations from the established requirements of the QM.

Please ensure that you file this electronic transmittal in your records management system. The Regional Laboratory will retain all the original documentation (e.g. COC[s], supporting files, etc.) according to our LSASD records management system. Please contact us within 14 days of receipt of this package if you determine there is a need for any changes. The process of disposing of the samples for this WO will be initiated 30 days from the date of this transmittal unless an alternate release date is specified on the Online Sample/Data Disposition and Customer Survey.

If you have any questions or concerns relating to this data package, contact our customer service line at 913-551-5295 or email R7_STC_Helpline@epa.gov.

Table of Contents

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#:** **2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Summary Information for the Project in this Report

Project Manager: Sharon Kennedy **Organization:** SEMD/AERR/RREP

Project ID: SKA76N00

Project Description: West Highway 6 and Highway 281

Location: Hastings **State:** Kansas **Program:** Superfund

Site Name: WEST HIGHWAY 6 & HIGHWA

Site ID: A76N **Site OU:** 00 **GPRA Code:** 000DC6

Purpose: Site Cleanup Support **QAPP Number:**

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
2200046-01	SVE-1	Air	12/05/2022 14:30	12/07/2022
2200046-02	SVE-2	Air	12/05/2022 14:45	12/07/2022
2200046-03	SVE-3	Air	12/05/2022 14:55	12/07/2022
2200046-04	SVE-4	Air	12/05/2022 15:05	12/07/2022
2200046-05	SVE-5	Air	12/05/2022 16:10	12/07/2022
2200046-06	SVE-6	Air	12/05/2022 16:20	12/07/2022
2200046-07	SVE Effluent	Air	12/05/2022 16:45	12/07/2022
2200046-08	RW-1	Water	12/06/2022 09:50	12/07/2022
2200046-09	RW-2	Water	12/06/2022 10:02	12/07/2022
2200046-10	RW-3	Water	12/06/2022 10:52	12/07/2022
2200046-11	RW-4	Water	12/06/2022 10:08	12/07/2022
2200046-12	GETS Influent	Water	12/06/2022 11:00	12/07/2022
2200046-13	GETS Effluent	Water	12/06/2022 11:07	12/07/2022
2200046-14	Trip Blank	Water	12/06/2022 10:17	12/07/2022
2200046-15	SVE-5/SVE-6	Air	12/05/2022 16:35	12/07/2022

Additional Sample Information

Results as provided by the field sampler. No significant figure rules applied.

Lab ID	CANISTER ID	STARTING PRESSURE (inHg)	ENDING PRESSURE (inHg)
2200046-01	712	-28	-3.5
2200046-02	759	-27.5	-4.5
2200046-03	643	-27.5	-4
2200046-04	743	-27	-2.5
2200046-05	686	-27	-4
2200046-06	675	-24	-3
2200046-07	835	-27.5	-3.5
2200046-15	813	-27	-4

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Analysis Case Narrative

Air Volatiles

Vinyl Chloride was UJ-coded in all samples. This analyte was not found in the samples at or above the reporting limit, however, the reporting limit is an estimate (UJ-coded) due to the initial instrument calibration curve not meeting linearity specifications, and continuing calibrations and lab control samples not meeting accuracy specifications. The actual reporting limit may be higher than the reported value.

Chloromethane was J-coded in samples 01, 02, 04, 05, and 15. Vinyl Acetate was J-coded in samples 02, 05, and 15. Although the analytes in question have been positively identified in the samples, the quantitation is an estimate (J-coded) due to high recovery of these analytes in the laboratory control sample. The actual concentration for these analytes may be lower than the reported values.

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Analysis Case Narrative

Volatiles

Case Narrative: VOA LDL W.13F:
Naphthalene was UJ-coded in samples 08-14. This analyte was not seen in the samples at or above the reporting limit, but the reporting limit is an estimate (UJ-coded) due to the initial calibration not meeting method specified limits (20.54% Relative Standard Deviation, Limit 20%RSD).

Dichlorodifluoromethane was UJ-coded in samples 08-14. This analyte was not detected in the samples above the Reporting Limit, but the reporting limit is an estimate (UJ-coded) due to low recovery in the continuing calibration verification sample (-21.6% Difference, Limit +/-20%D). Reporting limit may be higher.

Tetrachloroethene was J-coded in sample 09. The analyte was detected in the sample but the value is an estimate (J-coded) due to the fact that there may have been slight carryover from a previously analyzed sample with very high value for this analyte.

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Sharon Kennedy	**WO#:** **2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results

Lab ID: **2200046-01**

Sample ID: **SVE-1** **Matrix:** **Air** **Sampled:** **12/05/22 14:30**

Volatile Organic Compounds by GCMS — VOC 3230.04

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Propene (Reshot)	ND		0.35	ug/m3	12/27/2022	TO-15
Dichlorodifluoromethane (Reshot)	**3.5**		1.0	ug/m3	12/27/2022	TO-15
Chloromethane (Reshot)	**2.4**	J	0.42	ug/m3	12/27/2022	TO-15
1,2-Dichlorotetrafluoroethane (Reshot)	ND		1.4	ug/m3	12/27/2022	TO-15
Vinyl Chloride (Reshot)	ND	UJ	0.13	ug/m3	12/27/2022	TO-15
1,3-Butadiene (Reshot)	ND		0.45	ug/m3	12/27/2022	TO-15
Bromomethane (Reshot)	ND		0.78	ug/m3	12/27/2022	TO-15
Chloroethane (Reshot)	ND		0.53	ug/m3	12/27/2022	TO-15
Vinyl Bromide (Reshot)	ND		0.88	ug/m3	12/27/2022	TO-15
Acetone (Reshot)	**13**		0.96	ug/m3	12/27/2022	TO-15
Trichlorofluoromethane (Reshot)	**1.3**		1.1	ug/m3	12/27/2022	TO-15
2-Propanol (Reshot)	**0.86**		0.50	ug/m3	12/27/2022	TO-15
1,1-Dichloroethene (Reshot)	**1.5**		0.20	ug/m3	12/27/2022	TO-15
Methylene Chloride (Reshot)	ND		0.70	ug/m3	12/27/2022	TO-15
Allyl Chloride (Reshot)	ND		0.32	ug/m3	12/27/2022	TO-15
1,1,2-Trichlorotrifluoroethane (Reshot)	ND		1.5	ug/m3	12/27/2022	TO-15
Carbon Disulfide (Reshot)	ND		0.63	ug/m3	12/27/2022	TO-15
trans-1,2-Dichloroethene (Reshot)	ND		0.20	ug/m3	12/27/2022	TO-15
1,1-Dichloroethane (Reshot)	ND		0.82	ug/m3	12/27/2022	TO-15
Methyl tert-butyl ether (Reshot)	ND		0.73	ug/m3	12/27/2022	TO-15
Vinyl Acetate (Reshot)	ND		0.72	ug/m3	12/27/2022	TO-15
2-Butanone (Reshot)	**2.2**		1.9	ug/m3	12/27/2022	TO-15
cis-1,2-Dichloroethene (Reshot)	ND		0.20	ug/m3	12/27/2022	TO-15
Ethyl Acetate (Reshot)	ND		1.1	ug/m3	12/27/2022	TO-15
Hexane (Reshot)	ND		0.71	ug/m3	12/27/2022	TO-15
Chloroform (Reshot)	**0.24**		0.12	ug/m3	12/27/2022	TO-15
Tetrahydrofuran (Reshot)	**1.8**		0.60	ug/m3	12/27/2022	TO-15
1,2-Dichloroethane (Reshot)	ND		0.10	ug/m3	12/27/2022	TO-15
1,1,1-Trichloroethane (Reshot)	ND		1.1	ug/m3	12/27/2022	TO-15
Benzene (Reshot)	**6.6**		0.16	ug/m3	12/27/2022	TO-15
Carbon Tetrachloride (Reshot)	**4.8**		0.32	ug/m3	12/27/2022	TO-15
Cyclohexane (Reshot)	ND		0.70	ug/m3	12/27/2022	TO-15
1,2-Dichloropropane (Reshot)	ND		0.93	ug/m3	12/27/2022	TO-15
Bromodichloromethane (Reshot)	ND		1.4	ug/m3	12/27/2022	TO-15
1,4-Dioxane (Reshot)	ND		0.73	ug/m3	12/27/2022	TO-15
Trichloroethene (Reshot)	ND		0.14	ug/m3	12/27/2022	TO-15
2,2,4-Trimethylpentane (Reshot)	ND		1.0	ug/m3	12/27/2022	TO-15
Heptane (Reshot)	ND		0.83	ug/m3	12/27/2022	TO-15
cis-1,3-Dichloropropene (Reshot)	ND		0.46	ug/m3	12/27/2022	TO-15
4-Methyl-2-Pentanone (Reshot)	ND		1.7	ug/m3	12/27/2022	TO-15
trans-1,3-Dichloropropene (Reshot)	ND		0.46	ug/m3	12/27/2022	TO-15

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-01 (Continued)

Sample ID: SVE-1 **Matrix: Air** **Sampled: 12/05/22 14:30**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.04**
1,1,2-Trichloroethane (Reshot)	ND		1.1	ug/m3	12/27/2022	TO-15
Toluene (Reshot)	ND		0.76	ug/m3	12/27/2022	TO-15
2-Hexanone (Reshot)	ND		1.7	ug/m3	12/27/2022	TO-15
Dibromochloromethane (Reshot)	ND		1.7	ug/m3	12/27/2022	TO-15
1,2-Dibromoethane (Reshot)	ND		1.6	ug/m3	12/27/2022	TO-15
Tetrachloroethene (Reshot)	**130**		0.34	ug/m3	12/27/2022	TO-15
Chlorobenzene (Reshot)	ND		0.93	ug/m3	12/27/2022	TO-15
Ethyl Benzene (Reshot)	ND		0.88	ug/m3	12/27/2022	TO-15
m and/or p-Xylene (Reshot)	ND		1.8	ug/m3	12/27/2022	TO-15
Bromoform (Reshot)	ND		2.1	ug/m3	12/27/2022	TO-15
Styrene (Reshot)	ND		0.86	ug/m3	12/27/2022	TO-15
1,1,2,2-Tetrachloroethane (Reshot)	ND		1.4	ug/m3	12/27/2022	TO-15
o-Xylene (Reshot)	ND		0.88	ug/m3	12/27/2022	TO-15
4-Ethyltoluene (Reshot)	ND		4.0	ug/m3	12/27/2022	TO-15
1,3,5-Trimethylbenzene (Reshot)	ND		0.99	ug/m3	12/27/2022	TO-15
1,2,4-Trimethylbenzene (Reshot)	ND		0.99	ug/m3	12/27/2022	TO-15
Benzyl Chloride (Reshot)	ND		4.2	ug/m3	12/27/2022	TO-15
1,3-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/27/2022	TO-15
1,4-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/27/2022	TO-15
1,2-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/27/2022	TO-15
1,2,4-Trichlorobenzene (Reshot)	ND		1.5	ug/m3	12/27/2022	TO-15
Hexachlorobutadiene (Reshot)	ND		2.2	ug/m3	12/27/2022	TO-15

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-02

Sample ID: SVE-2 **Matrix: Air** **Sampled: 12/05/22 14:45**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.04**
Propene (Reshot)	ND		0.35	ug/m3	12/27/2022	TO-15
Dichlorodifluoromethane (Reshot)	**1.8**		1.0	ug/m3	12/27/2022	TO-15
Chloromethane (Reshot)	**1.5**	J	0.42	ug/m3	12/27/2022	TO-15
1,2-Dichlorotetrafluoroethane (Reshot)	ND		1.4	ug/m3	12/27/2022	TO-15
Vinyl Chloride (Reshot)	ND	UJ	0.13	ug/m3	12/27/2022	TO-15
1,3-Butadiene (Reshot)	ND		0.45	ug/m3	12/27/2022	TO-15
Bromomethane (Reshot)	ND		0.78	ug/m3	12/27/2022	TO-15
Chloroethane (Reshot)	ND		0.53	ug/m3	12/27/2022	TO-15
Vinyl Bromide (Reshot)	ND		0.88	ug/m3	12/27/2022	TO-15
Acetone (Reshot)	**14**		0.96	ug/m3	12/27/2022	TO-15
Trichlorofluoromethane (Reshot)	**1.2**		1.1	ug/m3	12/27/2022	TO-15
2-Propanol (Reshot)	**1.5**		0.50	ug/m3	12/27/2022	TO-15
1,1-Dichloroethene (Reshot)	**0.79**		0.20	ug/m3	12/27/2022	TO-15
Methylene Chloride (Reshot)	ND		0.70	ug/m3	12/27/2022	TO-15
Allyl Chloride (Reshot)	ND		0.32	ug/m3	12/27/2022	TO-15
1,1,2-Trichlorotrifluoroethane (Reshot)	ND		1.5	ug/m3	12/27/2022	TO-15
Carbon Disulfide (Reshot)	ND		0.63	ug/m3	12/27/2022	TO-15
trans-1,2-Dichloroethene (Reshot)	ND		0.20	ug/m3	12/27/2022	TO-15
1,1-Dichloroethane (Reshot)	ND		0.82	ug/m3	12/27/2022	TO-15
Methyl tert-butyl ether (Reshot)	ND		0.73	ug/m3	12/27/2022	TO-15
Vinyl Acetate (Reshot)	**1.8**	J	0.72	ug/m3	12/27/2022	TO-15
2-Butanone (Reshot)	**2.4**		1.9	ug/m3	12/27/2022	TO-15
cis-1,2-Dichloroethene (Reshot)	ND		0.20	ug/m3	12/27/2022	TO-15
Ethyl Acetate (Reshot)	ND		1.1	ug/m3	12/27/2022	TO-15
Hexane (Reshot)	ND		0.71	ug/m3	12/27/2022	TO-15
Chloroform (Reshot)	ND		0.12	ug/m3	12/27/2022	TO-15
Tetrahydrofuran (Reshot)	**2.0**		0.60	ug/m3	12/27/2022	TO-15
1,2-Dichloroethane (Reshot)	ND		0.10	ug/m3	12/27/2022	TO-15
1,1,1-Trichloroethane (Reshot)	ND		1.1	ug/m3	12/27/2022	TO-15
Benzene (Reshot)	**26**		0.16	ug/m3	12/27/2022	TO-15
Carbon Tetrachloride (Reshot)	**1.2**		0.32	ug/m3	12/27/2022	TO-15
Cyclohexane (Reshot)	ND		0.70	ug/m3	12/27/2022	TO-15
1,2-Dichloropropane (Reshot)	ND		0.93	ug/m3	12/27/2022	TO-15
Bromodichloromethane (Reshot)	ND		1.4	ug/m3	12/27/2022	TO-15
1,4-Dioxane (Reshot)	ND		0.73	ug/m3	12/27/2022	TO-15
Trichloroethene (Reshot)	ND		0.14	ug/m3	12/27/2022	TO-15
2,2,4-Trimethylpentane (Reshot)	ND		1.0	ug/m3	12/27/2022	TO-15
Heptane (Reshot)	ND		0.83	ug/m3	12/27/2022	TO-15
cis-1,3-Dichloropropene (Reshot)	ND		0.46	ug/m3	12/27/2022	TO-15
4-Methyl-2-Pentanone (Reshot)	ND		1.7	ug/m3	12/27/2022	TO-15
trans-1,3-Dichloropropene (Reshot)	ND		0.46	ug/m3	12/27/2022	TO-15

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-02 (Continued)

Sample ID: SVE-2 **Matrix: Air** **Sampled: 12/05/22 14:45**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.04**
1,1,2-Trichloroethane (Reshot)	ND		1.1	ug/m3	12/27/2022	TO-15
Toluene (Reshot)	**0.92**		0.76	ug/m3	12/27/2022	TO-15
2-Hexanone (Reshot)	ND		1.7	ug/m3	12/27/2022	TO-15
Dibromochloromethane (Reshot)	ND		1.7	ug/m3	12/27/2022	TO-15
1,2-Dibromoethane (Reshot)	ND		1.6	ug/m3	12/27/2022	TO-15
Tetrachloroethene (Reshot)	**38**		0.34	ug/m3	12/27/2022	TO-15
Chlorobenzene (Reshot)	ND		0.93	ug/m3	12/27/2022	TO-15
Ethyl Benzene (Reshot)	ND		0.88	ug/m3	12/27/2022	TO-15
m and/or p-Xylene (Reshot)	ND		1.8	ug/m3	12/27/2022	TO-15
Bromoform (Reshot)	ND		2.1	ug/m3	12/27/2022	TO-15
Styrene (Reshot)	ND		0.86	ug/m3	12/27/2022	TO-15
1,1,2,2-Tetrachloroethane (Reshot)	ND		1.4	ug/m3	12/27/2022	TO-15
o-Xylene (Reshot)	ND		0.88	ug/m3	12/27/2022	TO-15
4-Ethyltoluene (Reshot)	ND		4.0	ug/m3	12/27/2022	TO-15
1,3,5-Trimethylbenzene (Reshot)	ND		0.99	ug/m3	12/27/2022	TO-15
1,2,4-Trimethylbenzene (Reshot)	ND		0.99	ug/m3	12/27/2022	TO-15
Benzyl Chloride (Reshot)	ND		4.2	ug/m3	12/27/2022	TO-15
1,3-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/27/2022	TO-15
1,4-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/27/2022	TO-15
1,2-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/27/2022	TO-15
1,2,4-Trichlorobenzene (Reshot)	ND		1.5	ug/m3	12/27/2022	TO-15
Hexachlorobutadiene (Reshot)	ND		2.2	ug/m3	12/27/2022	TO-15

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-03

Sample ID: SVE-3 **Matrix: Air** **Sampled: 12/05/22 14:55**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.04**
Propene	ND		0.35	ug/m3	12/21/2022	TO-15
Dichlorodifluoromethane	**8.8**		1.0	ug/m3	12/21/2022	TO-15
Chloromethane	**0.96**		0.42	ug/m3	12/21/2022	TO-15
1,2-Dichlorotetrafluoroethane	ND		1.4	ug/m3	12/21/2022	TO-15
Vinyl Chloride	ND	UJ	0.13	ug/m3	12/21/2022	TO-15
1,3-Butadiene	ND		0.45	ug/m3	12/21/2022	TO-15
Bromomethane	ND		0.78	ug/m3	12/21/2022	TO-15
Chloroethane	ND		0.53	ug/m3	12/21/2022	TO-15
Vinyl Bromide	ND		0.88	ug/m3	12/21/2022	TO-15
Acetone	**16**		0.96	ug/m3	12/21/2022	TO-15
Trichlorofluoromethane	**1.7**		1.1	ug/m3	12/21/2022	TO-15
2-Propanol	**0.90**		0.50	ug/m3	12/21/2022	TO-15
1,1-Dichloroethene	**0.69**		0.20	ug/m3	12/21/2022	TO-15
Methylene Chloride	ND		0.70	ug/m3	12/21/2022	TO-15
Allyl Chloride	ND		0.32	ug/m3	12/21/2022	TO-15
1,1,2-Trichlorotrifluoroethane	ND		1.5	ug/m3	12/21/2022	TO-15
Carbon Disulfide	ND		0.63	ug/m3	12/21/2022	TO-15
trans-1,2-Dichloroethene	ND		0.20	ug/m3	12/21/2022	TO-15
1,1-Dichloroethane	ND		0.82	ug/m3	12/21/2022	TO-15
Methyl tert-butyl ether	ND		0.73	ug/m3	12/21/2022	TO-15
Vinyl Acetate	**1.2**		0.72	ug/m3	12/21/2022	TO-15
2-Butanone	**3.0**		1.9	ug/m3	12/21/2022	TO-15
cis-1,2-Dichloroethene	**0.55**		0.20	ug/m3	12/21/2022	TO-15
Ethyl Acetate	ND		1.1	ug/m3	12/21/2022	TO-15
Hexane	ND		0.71	ug/m3	12/21/2022	TO-15
Chloroform	**0.36**		0.12	ug/m3	12/21/2022	TO-15
Tetrahydrofuran	**2.1**		0.60	ug/m3	12/21/2022	TO-15
1,2-Dichloroethane	ND		0.10	ug/m3	12/21/2022	TO-15
1,1,1-Trichloroethane	ND		1.1	ug/m3	12/21/2022	TO-15
Benzene	**8.1**		0.16	ug/m3	12/21/2022	TO-15
Carbon Tetrachloride	**17**		0.32	ug/m3	12/21/2022	TO-15
Cyclohexane	ND		0.70	ug/m3	12/21/2022	TO-15
1,2-Dichloropropane	ND		0.93	ug/m3	12/21/2022	TO-15
Bromodichloromethane	ND		1.4	ug/m3	12/21/2022	TO-15
1,4-Dioxane	ND		0.73	ug/m3	12/21/2022	TO-15
Trichloroethene	**0.44**		0.14	ug/m3	12/21/2022	TO-15
2,2,4-Trimethylpentane	ND		1.0	ug/m3	12/21/2022	TO-15
Heptane	ND		0.83	ug/m3	12/21/2022	TO-15
cis-1,3-Dichloropropene	ND		0.46	ug/m3	12/21/2022	TO-15
4-Methyl-2-Pentanone	ND		1.7	ug/m3	12/21/2022	TO-15
trans-1,3-Dichloropropene	ND		0.46	ug/m3	12/21/2022	TO-15

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-03 (Continued)

Sample ID: SVE-3 **Matrix: Air** **Sampled: 12/05/22 14:55**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.04**
1,1,2-Trichloroethane	ND		1.1	ug/m3	12/21/2022	TO-15
Toluene	ND		0.76	ug/m3	12/21/2022	TO-15
2-Hexanone	ND		1.7	ug/m3	12/21/2022	TO-15
Dibromochloromethane	ND		1.7	ug/m3	12/21/2022	TO-15
1,2-Dibromoethane	ND		1.6	ug/m3	12/21/2022	TO-15
Tetrachloroethene	**510**		6.8	ug/m3	12/20/2022	TO-15
Chlorobenzene	ND		0.93	ug/m3	12/21/2022	TO-15
Ethyl Benzene	ND		0.88	ug/m3	12/21/2022	TO-15
m and/or p-Xylene	ND		1.8	ug/m3	12/21/2022	TO-15
Bromoform	ND		2.1	ug/m3	12/21/2022	TO-15
Styrene	ND		0.86	ug/m3	12/21/2022	TO-15
1,1,2,2-Tetrachloroethane	ND		1.4	ug/m3	12/21/2022	TO-15
o-Xylene	ND		0.88	ug/m3	12/21/2022	TO-15
4-Ethyltoluene	ND		4.0	ug/m3	12/21/2022	TO-15
1,3,5-Trimethylbenzene	ND		0.99	ug/m3	12/21/2022	TO-15
1,2,4-Trimethylbenzene	ND		0.99	ug/m3	12/21/2022	TO-15
Benzyl Chloride	ND		4.2	ug/m3	12/21/2022	TO-15
1,3-Dichlorobenzene	ND		1.2	ug/m3	12/21/2022	TO-15
1,4-Dichlorobenzene	ND		1.2	ug/m3	12/21/2022	TO-15
1,2-Dichlorobenzene	ND		1.2	ug/m3	12/21/2022	TO-15
1,2,4-Trichlorobenzene	ND		1.5	ug/m3	12/21/2022	TO-15
Hexachlorobutadiene	ND		2.2	ug/m3	12/21/2022	TO-15

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#:** **2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: **2200046-04**

Sample ID: **SVE-4** **Matrix:** **Air** **Sampled:** **12/05/22 15:05**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.04**
Acetone	**52**		19	ug/m3	12/20/2022	TO-15

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300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-04

Sample ID: SVE-4 **Matrix: Air** **Sampled: 12/05/22 15:05**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.04**
Propene (Reshot)	ND		0.35	ug/m3	12/27/2022	TO-15
Dichlorodifluoromethane (Reshot)	**1.9**		1.0	ug/m3	12/27/2022	TO-15
Chloromethane (Reshot)	**1.6**	J	0.42	ug/m3	12/27/2022	TO-15
1,2-Dichlorotetrafluoroethane (Reshot)	ND		1.4	ug/m3	12/27/2022	TO-15
Vinyl Chloride (Reshot)	ND	UJ	0.13	ug/m3	12/27/2022	TO-15
1,3-Butadiene (Reshot)	ND		0.45	ug/m3	12/27/2022	TO-15
Bromomethane (Reshot)	ND		0.78	ug/m3	12/27/2022	TO-15
Chloroethane (Reshot)	ND		0.53	ug/m3	12/27/2022	TO-15
Vinyl Bromide (Reshot)	ND		0.88	ug/m3	12/27/2022	TO-15
Trichlorofluoromethane (Reshot)	**1.2**		1.1	ug/m3	12/27/2022	TO-15
2-Propanol (Reshot)	**0.50**		0.50	ug/m3	12/27/2022	TO-15
1,1-Dichloroethene (Reshot)	**0.57**		0.20	ug/m3	12/27/2022	TO-15
Methylene Chloride (Reshot)	ND		0.70	ug/m3	12/27/2022	TO-15
Allyl Chloride (Reshot)	ND		0.32	ug/m3	12/27/2022	TO-15
1,1,2-Trichlorotrifluoroethane (Reshot)	ND		1.5	ug/m3	12/27/2022	TO-15
Carbon Disulfide (Reshot)	ND		0.63	ug/m3	12/27/2022	TO-15
trans-1,2-Dichloroethene (Reshot)	ND		0.20	ug/m3	12/27/2022	TO-15
1,1-Dichloroethane (Reshot)	ND		0.82	ug/m3	12/27/2022	TO-15
Methyl tert-butyl ether (Reshot)	ND		0.73	ug/m3	12/27/2022	TO-15
Vinyl Acetate (Reshot)	ND		0.72	ug/m3	12/27/2022	TO-15
2-Butanone (Reshot)	**2.4**		1.9	ug/m3	12/27/2022	TO-15
cis-1,2-Dichloroethene (Reshot)	ND		0.20	ug/m3	12/27/2022	TO-15
Ethyl Acetate (Reshot)	ND		1.1	ug/m3	12/27/2022	TO-15
Hexane (Reshot)	ND		0.71	ug/m3	12/27/2022	TO-15
Chloroform (Reshot)	**0.15**		0.12	ug/m3	12/27/2022	TO-15
Tetrahydrofuran (Reshot)	**1.4**		0.60	ug/m3	12/27/2022	TO-15
1,2-Dichloroethane (Reshot)	ND		0.10	ug/m3	12/27/2022	TO-15
1,1,1-Trichloroethane (Reshot)	ND		1.1	ug/m3	12/27/2022	TO-15
Benzene (Reshot)	**3.1**		0.16	ug/m3	12/27/2022	TO-15
Carbon Tetrachloride (Reshot)	**0.81**		0.32	ug/m3	12/27/2022	TO-15
Cyclohexane (Reshot)	ND		0.70	ug/m3	12/27/2022	TO-15
1,2-Dichloropropane (Reshot)	ND		0.93	ug/m3	12/27/2022	TO-15
Bromodichloromethane (Reshot)	ND		1.4	ug/m3	12/27/2022	TO-15
1,4-Dioxane (Reshot)	ND		0.73	ug/m3	12/27/2022	TO-15
Trichloroethene (Reshot)	**0.65**		0.14	ug/m3	12/27/2022	TO-15
2,2,4-Trimethylpentane (Reshot)	ND		1.0	ug/m3	12/27/2022	TO-15
Heptane (Reshot)	ND		0.83	ug/m3	12/27/2022	TO-15
cis-1,3-Dichloropropene (Reshot)	ND		0.46	ug/m3	12/27/2022	TO-15
4-Methyl-2-Pentanone (Reshot)	ND		1.7	ug/m3	12/27/2022	TO-15
trans-1,3-Dichloropropene (Reshot)	ND		0.46	ug/m3	12/27/2022	TO-15
1,1,2-Trichloroethane (Reshot)	ND		1.1	ug/m3	12/27/2022	TO-15

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Region 7
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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-04 (Continued)

Sample ID: SVE-4 **Matrix: Air** **Sampled: 12/05/22 15:05**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.04**
Toluene (Reshot)	ND		0.76	ug/m3	12/27/2022	TO-15
2-Hexanone (Reshot)	ND		1.7	ug/m3	12/27/2022	TO-15
Dibromochloromethane (Reshot)	ND		1.7	ug/m3	12/27/2022	TO-15
1,2-Dibromoethane (Reshot)	ND		1.6	ug/m3	12/27/2022	TO-15
Tetrachloroethene (Reshot)	**43**		0.34	ug/m3	12/27/2022	TO-15
Chlorobenzene (Reshot)	ND		0.93	ug/m3	12/27/2022	TO-15
Ethyl Benzene (Reshot)	ND		0.88	ug/m3	12/27/2022	TO-15
m and/or p-Xylene (Reshot)	ND		1.8	ug/m3	12/27/2022	TO-15
Bromoform (Reshot)	ND		2.1	ug/m3	12/27/2022	TO-15
Styrene (Reshot)	ND		0.86	ug/m3	12/27/2022	TO-15
1,1,2,2-Tetrachloroethane (Reshot)	ND		1.4	ug/m3	12/27/2022	TO-15
o-Xylene (Reshot)	ND		0.88	ug/m3	12/27/2022	TO-15
4-Ethyltoluene (Reshot)	ND		4.0	ug/m3	12/27/2022	TO-15
1,3,5-Trimethylbenzene (Reshot)	ND		0.99	ug/m3	12/27/2022	TO-15
1,2,4-Trimethylbenzene (Reshot)	ND		0.99	ug/m3	12/27/2022	TO-15
Benzyl Chloride (Reshot)	ND		4.2	ug/m3	12/27/2022	TO-15
1,3-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/27/2022	TO-15
1,4-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/27/2022	TO-15
1,2-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/27/2022	TO-15
1,2,4-Trichlorobenzene (Reshot)	ND		1.5	ug/m3	12/27/2022	TO-15
Hexachlorobutadiene (Reshot)	ND		2.2	ug/m3	12/27/2022	TO-15

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-05

Sample ID: SVE-5 **Matrix: Air** **Sampled: 12/05/22 16:10**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.04**
Propene (Reshot)	ND		0.35	ug/m3	12/28/2022	TO-15
Dichlorodifluoromethane (Reshot)	**1.5**		1.0	ug/m3	12/28/2022	TO-15
Chloromethane (Reshot)	**1.1**	J	0.42	ug/m3	12/28/2022	TO-15
1,2-Dichlorotetrafluoroethane (Reshot)	ND		1.4	ug/m3	12/28/2022	TO-15
Vinyl Chloride (Reshot)	ND	UJ	0.13	ug/m3	12/28/2022	TO-15
1,3-Butadiene (Reshot)	ND		0.45	ug/m3	12/28/2022	TO-15
Bromomethane (Reshot)	ND		0.78	ug/m3	12/28/2022	TO-15
Chloroethane (Reshot)	ND		0.53	ug/m3	12/28/2022	TO-15
Vinyl Bromide (Reshot)	ND		0.88	ug/m3	12/28/2022	TO-15
Acetone (Reshot)	**6.8**		0.96	ug/m3	12/28/2022	TO-15
Trichlorofluoromethane (Reshot)	**1.2**		1.1	ug/m3	12/28/2022	TO-15
2-Propanol (Reshot)	ND		0.50	ug/m3	12/28/2022	TO-15
1,1-Dichloroethene (Reshot)	**14**		0.20	ug/m3	12/28/2022	TO-15
Methylene Chloride (Reshot)	ND		0.70	ug/m3	12/28/2022	TO-15
Allyl Chloride (Reshot)	ND		0.32	ug/m3	12/28/2022	TO-15
1,1,2-Trichlorotrifluoroethane (Reshot)	ND		1.5	ug/m3	12/28/2022	TO-15
Carbon Disulfide (Reshot)	ND		0.63	ug/m3	12/28/2022	TO-15
trans-1,2-Dichloroethene (Reshot)	ND		0.20	ug/m3	12/28/2022	TO-15
1,1-Dichloroethane (Reshot)	ND		0.82	ug/m3	12/28/2022	TO-15
Methyl tert-butyl ether (Reshot)	ND		0.73	ug/m3	12/28/2022	TO-15
Vinyl Acetate (Reshot)	**1.3**	J	0.72	ug/m3	12/28/2022	TO-15
2-Butanone (Reshot)	**3.0**		1.9	ug/m3	12/28/2022	TO-15
cis-1,2-Dichloroethene (Reshot)	ND		0.20	ug/m3	12/28/2022	TO-15
Ethyl Acetate (Reshot)	ND		1.1	ug/m3	12/28/2022	TO-15
Hexane (Reshot)	ND		0.71	ug/m3	12/28/2022	TO-15
Chloroform (Reshot)	**2.4**		0.12	ug/m3	12/28/2022	TO-15
Tetrahydrofuran (Reshot)	**1.1**		0.60	ug/m3	12/28/2022	TO-15
1,2-Dichloroethane (Reshot)	**0.89**		0.10	ug/m3	12/28/2022	TO-15
1,1,1-Trichloroethane (Reshot)	**58**		1.1	ug/m3	12/28/2022	TO-15
Benzene (Reshot)	**0.58**		0.16	ug/m3	12/28/2022	TO-15
Carbon Tetrachloride (Reshot)	**0.43**		0.32	ug/m3	12/28/2022	TO-15
Cyclohexane (Reshot)	**1.4**		0.70	ug/m3	12/28/2022	TO-15
1,2-Dichloropropane (Reshot)	ND		0.93	ug/m3	12/28/2022	TO-15
Bromodichloromethane (Reshot)	ND		1.4	ug/m3	12/28/2022	TO-15
1,4-Dioxane (Reshot)	**6.8**		0.73	ug/m3	12/28/2022	TO-15
Trichloroethene (Reshot)	**7.3**		0.14	ug/m3	12/28/2022	TO-15
2,2,4-Trimethylpentane (Reshot)	ND		1.0	ug/m3	12/28/2022	TO-15
Heptane (Reshot)	ND		0.83	ug/m3	12/28/2022	TO-15
cis-1,3-Dichloropropene (Reshot)	ND		0.46	ug/m3	12/28/2022	TO-15
4-Methyl-2-Pentanone (Reshot)	ND		1.7	ug/m3	12/28/2022	TO-15
trans-1,3-Dichloropropene (Reshot)	ND		0.46	ug/m3	12/28/2022	TO-15

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300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#:** **2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: **2200046-05 (Continued)**

Sample ID: **SVE-5** **Matrix:** **Air** **Sampled:** **12/05/22 16:10**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.04**
1,1,2-Trichloroethane (Reshot)	ND		1.1	ug/m3	12/28/2022	TO-15
Toluene (Reshot)	ND		0.76	ug/m3	12/28/2022	TO-15
2-Hexanone (Reshot)	ND		1.7	ug/m3	12/28/2022	TO-15
Dibromochloromethane (Reshot)	ND		1.7	ug/m3	12/28/2022	TO-15
1,2-Dibromoethane (Reshot)	ND		1.6	ug/m3	12/28/2022	TO-15
Tetrachloroethene (Reshot)	**9800**		68	ug/m3	12/28/2022	TO-15
Chlorobenzene (Reshot)	ND		0.93	ug/m3	12/28/2022	TO-15
Ethyl Benzene (Reshot)	**1.3**		0.88	ug/m3	12/28/2022	TO-15
m and/or p-Xylene (Reshot)	ND		1.8	ug/m3	12/28/2022	TO-15
Bromoform (Reshot)	ND		2.1	ug/m3	12/28/2022	TO-15
Styrene (Reshot)	ND		0.86	ug/m3	12/28/2022	TO-15
1,1,2,2-Tetrachloroethane (Reshot)	ND		1.4	ug/m3	12/28/2022	TO-15
o-Xylene (Reshot)	ND		0.88	ug/m3	12/28/2022	TO-15
4-Ethyltoluene (Reshot)	ND		4.0	ug/m3	12/28/2022	TO-15
1,3,5-Trimethylbenzene (Reshot)	ND		0.99	ug/m3	12/28/2022	TO-15
1,2,4-Trimethylbenzene (Reshot)	ND		0.99	ug/m3	12/28/2022	TO-15
Benzyl Chloride (Reshot)	ND		4.2	ug/m3	12/28/2022	TO-15
1,3-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/28/2022	TO-15
1,4-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/28/2022	TO-15
1,2-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/28/2022	TO-15
1,2,4-Trichlorobenzene (Reshot)	ND		1.5	ug/m3	12/28/2022	TO-15
Hexachlorobutadiene (Reshot)	ND		2.2	ug/m3	12/28/2022	TO-15

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-06

Sample ID: SVE-6 **Matrix: Air** **Sampled: 12/05/22 16:20**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.04**
Propene	ND		0.35	ug/m3	12/21/2022	TO-15
Dichlorodifluoromethane	**2.0**		1.0	ug/m3	12/21/2022	TO-15
Chloromethane	**0.47**		0.42	ug/m3	12/21/2022	TO-15
1,2-Dichlorotetrafluoroethane	ND		1.4	ug/m3	12/21/2022	TO-15
Vinyl Chloride	ND	UJ	0.13	ug/m3	12/21/2022	TO-15
1,3-Butadiene	ND		0.45	ug/m3	12/21/2022	TO-15
Bromomethane	ND		0.78	ug/m3	12/21/2022	TO-15
Chloroethane	ND		0.53	ug/m3	12/21/2022	TO-15
Vinyl Bromide	ND		0.88	ug/m3	12/21/2022	TO-15
Acetone	**11**		0.96	ug/m3	12/21/2022	TO-15
Trichlorofluoromethane	**1.3**		1.1	ug/m3	12/21/2022	TO-15
2-Propanol	**0.59**		0.50	ug/m3	12/21/2022	TO-15
1,1-Dichloroethene	**14**		0.20	ug/m3	12/21/2022	TO-15
Methylene Chloride	ND		0.70	ug/m3	12/21/2022	TO-15
Allyl Chloride	ND		0.32	ug/m3	12/21/2022	TO-15
1,1,2-Trichlorotrifluoroethane	ND		1.5	ug/m3	12/21/2022	TO-15
Carbon Disulfide	ND		0.63	ug/m3	12/21/2022	TO-15
trans-1,2-Dichloroethene	ND		0.20	ug/m3	12/21/2022	TO-15
1,1-Dichloroethane	ND		0.82	ug/m3	12/21/2022	TO-15
Methyl tert-butyl ether	ND		0.73	ug/m3	12/21/2022	TO-15
Vinyl Acetate	ND		0.72	ug/m3	12/21/2022	TO-15
2-Butanone	**17**		1.9	ug/m3	12/21/2022	TO-15
cis-1,2-Dichloroethene	ND		0.20	ug/m3	12/21/2022	TO-15
Ethyl Acetate	ND		1.1	ug/m3	12/21/2022	TO-15
Hexane	**0.73**		0.71	ug/m3	12/21/2022	TO-15
Chloroform	**2.6**		0.12	ug/m3	12/21/2022	TO-15
Tetrahydrofuran	**5.0**		0.60	ug/m3	12/21/2022	TO-15
1,2-Dichloroethane	**0.78**		0.10	ug/m3	12/21/2022	TO-15
1,1,1-Trichloroethane	**50**		1.1	ug/m3	12/21/2022	TO-15
Benzene	**0.59**		0.16	ug/m3	12/21/2022	TO-15
Carbon Tetrachloride	**0.40**		0.32	ug/m3	12/21/2022	TO-15
Cyclohexane	**1.1**		0.70	ug/m3	12/21/2022	TO-15
1,2-Dichloropropane	ND		0.93	ug/m3	12/21/2022	TO-15
Bromodichloromethane	ND		1.4	ug/m3	12/21/2022	TO-15
1,4-Dioxane	**6.4**		0.73	ug/m3	12/21/2022	TO-15
Trichloroethene	**6.9**		0.14	ug/m3	12/21/2022	TO-15
2,2,4-Trimethylpentane	ND		1.0	ug/m3	12/21/2022	TO-15
Heptane	ND		0.83	ug/m3	12/21/2022	TO-15
cis-1,3-Dichloropropene	ND		0.46	ug/m3	12/21/2022	TO-15
4-Methyl-2-Pentanone	ND		1.7	ug/m3	12/21/2022	TO-15
trans-1,3-Dichloropropene	ND		0.46	ug/m3	12/21/2022	TO-15

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-06 (Continued)

Sample ID: SVE-6 **Matrix: Air** **Sampled: 12/05/22 16:20**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.04**
1,1,2-Trichloroethane	ND		1.1	ug/m3	12/21/2022	TO-15
Toluene	ND		0.76	ug/m3	12/21/2022	TO-15
2-Hexanone	ND		1.7	ug/m3	12/21/2022	TO-15
Dibromochloromethane	ND		1.7	ug/m3	12/21/2022	TO-15
1,2-Dibromoethane	ND		1.6	ug/m3	12/21/2022	TO-15
Chlorobenzene	ND		0.93	ug/m3	12/21/2022	TO-15
Ethyl Benzene	**1.1**		0.88	ug/m3	12/21/2022	TO-15
m and/or p-Xylene	ND		1.8	ug/m3	12/21/2022	TO-15
Bromoform	ND		2.1	ug/m3	12/21/2022	TO-15
Styrene	ND		0.86	ug/m3	12/21/2022	TO-15
1,1,2,2-Tetrachloroethane	ND		1.4	ug/m3	12/21/2022	TO-15
o-Xylene	ND		0.88	ug/m3	12/21/2022	TO-15
4-Ethyltoluene	ND		4.0	ug/m3	12/21/2022	TO-15
1,3,5-Trimethylbenzene	ND		0.99	ug/m3	12/21/2022	TO-15
1,2,4-Trimethylbenzene	ND		0.99	ug/m3	12/21/2022	TO-15
Benzyl Chloride	ND		4.2	ug/m3	12/21/2022	TO-15
1,3-Dichlorobenzene	ND		1.2	ug/m3	12/21/2022	TO-15
1,4-Dichlorobenzene	ND		1.2	ug/m3	12/21/2022	TO-15
1,2-Dichlorobenzene	ND		1.2	ug/m3	12/21/2022	TO-15
1,2,4-Trichlorobenzene	ND		1.5	ug/m3	12/21/2022	TO-15
Hexachlorobutadiene	ND		2.2	ug/m3	12/21/2022	TO-15

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#:** **2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: **2200046-06**

Sample ID: **SVE-6** **Matrix:** **Air** **Sampled:** **12/05/22 16:20**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.04**
Tetrachloroethene (Reshot)	**8000**		68	ug/m3	12/27/2022	TO-15

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-07

Sample ID: SVE Effluent **Matrix: Air** **Sampled: 12/05/22 16:45**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.04**
Propene	ND		0.35	ug/m3	12/21/2022	TO-15
Dichlorodifluoromethane	**9.5**		1.0	ug/m3	12/21/2022	TO-15
Chloromethane	**0.60**		0.42	ug/m3	12/21/2022	TO-15
1,2-Dichlorotetrafluoroethane	ND		1.4	ug/m3	12/21/2022	TO-15
Vinyl Chloride	ND	UJ	0.13	ug/m3	12/21/2022	TO-15
1,3-Butadiene	ND		0.45	ug/m3	12/21/2022	TO-15
Bromomethane	ND		0.78	ug/m3	12/21/2022	TO-15
Chloroethane	ND		0.53	ug/m3	12/21/2022	TO-15
Vinyl Bromide	ND		0.88	ug/m3	12/21/2022	TO-15
Acetone	**12**		0.96	ug/m3	12/21/2022	TO-15
Trichlorofluoromethane	**1.7**		1.1	ug/m3	12/21/2022	TO-15
2-Propanol	**0.77**		0.50	ug/m3	12/21/2022	TO-15
1,1-Dichloroethene	**20**		0.20	ug/m3	12/21/2022	TO-15
Methylene Chloride	ND		0.70	ug/m3	12/21/2022	TO-15
Allyl Chloride	ND		0.32	ug/m3	12/21/2022	TO-15
1,1,2-Trichlorotrifluoroethane	ND		1.5	ug/m3	12/21/2022	TO-15
Carbon Disulfide	ND		0.63	ug/m3	12/21/2022	TO-15
trans-1,2-Dichloroethene	ND		0.20	ug/m3	12/21/2022	TO-15
1,1-Dichloroethane	ND		0.82	ug/m3	12/21/2022	TO-15
Methyl tert-butyl ether	ND		0.73	ug/m3	12/21/2022	TO-15
Vinyl Acetate	**0.82**		0.72	ug/m3	12/21/2022	TO-15
2-Butanone	ND		1.9	ug/m3	12/21/2022	TO-15
cis-1,2-Dichloroethene	ND		0.20	ug/m3	12/21/2022	TO-15
Ethyl Acetate	ND		1.1	ug/m3	12/21/2022	TO-15
Hexane	ND		0.71	ug/m3	12/21/2022	TO-15
Chloroform	**0.55**		0.12	ug/m3	12/21/2022	TO-15
Tetrahydrofuran	**0.64**		0.60	ug/m3	12/21/2022	TO-15
1,2-Dichloroethane	ND		0.10	ug/m3	12/21/2022	TO-15
1,1,1-Trichloroethane	**6.0**		1.1	ug/m3	12/21/2022	TO-15
Benzene	**1.8**		0.16	ug/m3	12/21/2022	TO-15
Carbon Tetrachloride	**14**		0.32	ug/m3	12/21/2022	TO-15
Cyclohexane	ND		0.70	ug/m3	12/21/2022	TO-15
1,2-Dichloropropane	ND		0.93	ug/m3	12/21/2022	TO-15
Bromodichloromethane	ND		1.4	ug/m3	12/21/2022	TO-15
1,4-Dioxane	ND		0.73	ug/m3	12/21/2022	TO-15
Trichloroethene	**0.63**		0.14	ug/m3	12/21/2022	TO-15
2,2,4-Trimethylpentane	ND		1.0	ug/m3	12/21/2022	TO-15
Heptane	ND		0.83	ug/m3	12/21/2022	TO-15
cis-1,3-Dichloropropene	ND		0.46	ug/m3	12/21/2022	TO-15
4-Methyl-2-Pentanone	ND		1.7	ug/m3	12/21/2022	TO-15
trans-1,3-Dichloropropene	ND		0.46	ug/m3	12/21/2022	TO-15

United States Environmental Protection Agency
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300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-07 (Continued)

Sample ID: SVE Effluent **Matrix: Air** **Sampled: 12/05/22 16:45**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.04**
1,1,2-Trichloroethane	ND		1.1	ug/m3	12/21/2022	TO-15
Toluene	ND		0.76	ug/m3	12/21/2022	TO-15
2-Hexanone	ND		1.7	ug/m3	12/21/2022	TO-15
Dibromochloromethane	ND		1.7	ug/m3	12/21/2022	TO-15
1,2-Dibromoethane	ND		1.6	ug/m3	12/21/2022	TO-15
Tetrachloroethene	**610**		6.8	ug/m3	12/21/2022	TO-15
Chlorobenzene	ND		0.93	ug/m3	12/21/2022	TO-15
Ethyl Benzene	ND		0.88	ug/m3	12/21/2022	TO-15
m and/or p-Xylene	ND		1.8	ug/m3	12/21/2022	TO-15
Bromoform	ND		2.1	ug/m3	12/21/2022	TO-15
Styrene	ND		0.86	ug/m3	12/21/2022	TO-15
1,1,2,2-Tetrachloroethane	ND		1.4	ug/m3	12/21/2022	TO-15
o-Xylene	ND		0.88	ug/m3	12/21/2022	TO-15
4-Ethyltoluene	ND		4.0	ug/m3	12/21/2022	TO-15
1,3,5-Trimethylbenzene	ND		0.99	ug/m3	12/21/2022	TO-15
1,2,4-Trimethylbenzene	ND		0.99	ug/m3	12/21/2022	TO-15
Benzyl Chloride	ND		4.2	ug/m3	12/21/2022	TO-15
1,3-Dichlorobenzene	ND		1.2	ug/m3	12/21/2022	TO-15
1,4-Dichlorobenzene	ND		1.2	ug/m3	12/21/2022	TO-15
1,2-Dichlorobenzene	ND		1.2	ug/m3	12/21/2022	TO-15
1,2,4-Trichlorobenzene	ND		1.5	ug/m3	12/21/2022	TO-15
Hexachlorobutadiene	ND		2.2	ug/m3	12/21/2022	TO-15

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300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-08

Sample ID: RW-1 **Matrix: Water** **Sampled: 12/06/22 09:50**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.13**
Dichlorodifluoromethane	ND	UJ	1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Vinyl Chloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromomethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Trichlorofluoromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2-Trichlorotrifluoroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Acetone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Carbon Disulfide	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methyl Acetate	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methyl tert-butyl ether	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methylene Chloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
trans-1,2-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1-Dichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
2-Butanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
cis-1,2-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloroform	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,1-Trichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Cyclohexane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Carbon Tetrachloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Benzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Trichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-08 (Continued)

Sample ID: RW-1 **Matrix: Water** **Sampled: 12/06/22 09:50**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.13**
Methylcyclohexane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichloropropane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromodichloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
cis-1,3-Dichloropropene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
4-Methyl-2-Pentanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Toluene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
trans-1,3-Dichloropropene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2-Trichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
2-Hexanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Dibromochloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dibromoethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Ethyl Benzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
m and/or p-Xylene	ND		2.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
o-Xylene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Styrene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromoform	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Isopropylbenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2,2-Tetrachloroethane	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,3-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,4-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2,4-Trichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#:** **2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: **2200046-08 (Continued)**

Sample ID: **RW-1** **Matrix:** **Water** **Sampled:** **12/06/22 09:50**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.13**
Naphthalene	ND	UJ	2.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2,3-Trichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#:** **2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: **2200046-08**

Sample ID: **RW-1** **Matrix:** **Water** **Sampled:** **12/06/22 09:50**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.13**
Tetrachloroethene (Reshot)	**1300**		100	ug/L	12/09/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-09

Sample ID: RW-2 **Matrix: Water** **Sampled: 12/06/22 10:02**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.13**
Dichlorodifluoromethane	ND	UJ	1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Vinyl Chloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromomethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Trichlorofluoromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2-Trichlorotrifluoroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Acetone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Carbon Disulfide	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methyl Acetate	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methyl tert-butyl ether	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methylene Chloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
trans-1,2-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1-Dichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
2-Butanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
cis-1,2-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloroform	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,1-Trichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Cyclohexane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Carbon Tetrachloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Benzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Trichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-09 (Continued)

Sample ID: RW-2 **Matrix: Water** **Sampled: 12/06/22 10:02**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.13**
Methylcyclohexane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichloropropane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromodichloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
cis-1,3-Dichloropropene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
4-Methyl-2-Pentanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Toluene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
trans-1,3-Dichloropropene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2-Trichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Tetrachloroethene	**5.2**	J	1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
2-Hexanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Dibromochloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dibromoethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Ethyl Benzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
m and/or p-Xylene	ND		2.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
o-Xylene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Styrene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromoform	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Isopropylbenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2,2-Tetrachloroethane	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,3-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,4-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-09 (Continued)

Sample ID: RW-2 **Matrix: Water** **Sampled: 12/06/22 10:02**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.13**
1,2,4-Trichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Naphthalene	ND	UJ	2.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2,3-Trichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-10

Sample ID: RW-3 **Matrix: Water** **Sampled: 12/06/22 10:52**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.13**
Dichlorodifluoromethane	ND	UJ	1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Vinyl Chloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromomethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Trichlorofluoromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2-Trichlorotrifluoroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Acetone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Carbon Disulfide	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methyl Acetate	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methyl tert-butyl ether	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methylene Chloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
trans-1,2-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1-Dichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
2-Butanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
cis-1,2-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloroform	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,1-Trichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Cyclohexane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Carbon Tetrachloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Benzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Trichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-10 (Continued)

Sample ID: RW-3 **Matrix: Water** **Sampled: 12/06/22 10:52**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.13**
Methylcyclohexane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichloropropane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromodichloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
cis-1,3-Dichloropropene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
4-Methyl-2-Pentanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Toluene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
trans-1,3-Dichloropropene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2-Trichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Tetrachloroethene	**10**		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
2-Hexanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Dibromochloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dibromoethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Ethyl Benzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
m and/or p-Xylene	ND		2.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
o-Xylene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Styrene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromoform	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Isopropylbenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2,2-Tetrachloroethane	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,3-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,4-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-10 (Continued)

Sample ID: RW-3 **Matrix: Water** **Sampled: 12/06/22 10:52**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.13**
1,2,4-Trichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Naphthalene	ND	UJ	2.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2,3-Trichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-11

Sample ID: RW-4 **Matrix: Water** **Sampled: 12/06/22 10:08**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.13**
Dichlorodifluoromethane	ND	UJ	1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Vinyl Chloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromomethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Trichlorofluoromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2-Trichlorotrifluoroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1-Dichloroethene	**1.1**		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Acetone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Carbon Disulfide	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methyl Acetate	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methyl tert-butyl ether	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methylene Chloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
trans-1,2-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1-Dichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
2-Butanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
cis-1,2-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloroform	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,1-Trichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Cyclohexane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Carbon Tetrachloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Benzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Trichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-11 (Continued)

Sample ID: RW-4 **Matrix: Water** **Sampled: 12/06/22 10:08**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.13**
Methylcyclohexane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichloropropane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromodichloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
cis-1,3-Dichloropropene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
4-Methyl-2-Pentanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Toluene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
trans-1,3-Dichloropropene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2-Trichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Tetrachloroethene	**1.1**		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
2-Hexanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Dibromochloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dibromoethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Ethyl Benzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
m and/or p-Xylene	ND		2.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
o-Xylene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Styrene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromoform	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Isopropylbenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2,2-Tetrachloroethane	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,3-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,4-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-11 (Continued)

Sample ID: RW-4 **Matrix: Water** **Sampled: 12/06/22 10:08**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.13**
1,2,4-Trichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Naphthalene	ND	UJ	2.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2,3-Trichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-12

Sample ID: GETS Influent **Matrix: Water** **Sampled: 12/06/22 11:00**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.13**
Dichlorodifluoromethane	ND	UJ	1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Vinyl Chloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromomethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Trichlorofluoromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2-Trichlorotrifluoroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Acetone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Carbon Disulfide	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methyl Acetate	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methyl tert-butyl ether	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methylene Chloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
trans-1,2-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1-Dichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
2-Butanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
cis-1,2-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloroform	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,1-Trichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Cyclohexane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Carbon Tetrachloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Benzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Trichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-12 (Continued)

Sample ID: GETS Influent **Matrix: Water** **Sampled: 12/06/22 11:00**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.13**
Methylcyclohexane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichloropropane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromodichloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
cis-1,3-Dichloropropene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
4-Methyl-2-Pentanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Toluene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
trans-1,3-Dichloropropene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2-Trichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
2-Hexanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Dibromochloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dibromoethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Ethyl Benzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
m and/or p-Xylene	ND		2.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
o-Xylene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Styrene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromoform	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Isopropylbenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2,2-Tetrachloroethane	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,3-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,4-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2,4-Trichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#:** **2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: **2200046-12 (Continued)**

Sample ID: **GETS Influent** **Matrix:** **Water** **Sampled:** **12/06/22 11:00**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.13**
Naphthalene	ND	UJ	2.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2,3-Trichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#:** **2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: **2200046-12**

Sample ID: **GETS Influent** **Matrix:** **Water** **Sampled:** **12/06/22 11:00**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.13**
Tetrachloroethene (Reshot)	**360**		10	ug/L	12/09/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-13

Sample ID: GETS Effluent **Matrix: Water** **Sampled: 12/06/22 11:07**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.13**
Dichlorodifluoromethane	ND	UJ	1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Vinyl Chloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromomethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Trichlorofluoromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2-Trichlorotrifluoroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Acetone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Carbon Disulfide	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methyl Acetate	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methyl tert-butyl ether	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methylene Chloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
trans-1,2-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1-Dichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
2-Butanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
cis-1,2-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloroform	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,1-Trichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Cyclohexane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Carbon Tetrachloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Benzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Trichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

United States Environmental Protection Agency
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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-13 (Continued)

Sample ID: GETS Effluent **Matrix: Water** **Sampled: 12/06/22 11:07**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.13**
Methylcyclohexane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichloropropane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromodichloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
cis-1,3-Dichloropropene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
4-Methyl-2-Pentanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Toluene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
trans-1,3-Dichloropropene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2-Trichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Tetrachloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
2-Hexanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Dibromochloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dibromoethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Ethyl Benzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
m and/or p-Xylene	ND		2.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
o-Xylene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Styrene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromoform	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Isopropylbenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2,2-Tetrachloroethane	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,3-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,4-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-13 (Continued)

Sample ID: GETS Effluent **Matrix: Water** **Sampled: 12/06/22 11:07**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.13**
1,2,4-Trichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Naphthalene	ND	UJ	2.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2,3-Trichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-14

Sample ID: Trip Blank **Matrix: Water** **Sampled: 12/06/22 10:17**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.13**
Dichlorodifluoromethane	ND	UJ	1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Vinyl Chloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromomethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Trichlorofluoromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2-Trichlorotrifluoroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Acetone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Carbon Disulfide	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methyl Acetate	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methyl tert-butyl ether	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Methylene Chloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
trans-1,2-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1-Dichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
2-Butanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
cis-1,2-Dichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chloroform	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,1-Trichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Cyclohexane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Carbon Tetrachloride	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Benzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Trichloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-14 (Continued)

Sample ID: Trip Blank **Matrix: Water** **Sampled: 12/06/22 10:17**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.13**
Methylcyclohexane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichloropropane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromodichloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
cis-1,3-Dichloropropene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
4-Methyl-2-Pentanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Toluene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
trans-1,3-Dichloropropene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2-Trichloroethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Tetrachloroethene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
2-Hexanone	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Dibromochloromethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dibromoethane	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Chlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Ethyl Benzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
m and/or p-Xylene	ND		2.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
o-Xylene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Styrene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Bromoform	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Isopropylbenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,1,2,2-Tetrachloroethane	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,3-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,4-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-14 (Continued)

Sample ID: Trip Blank **Matrix: Water** **Sampled: 12/06/22 10:17**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.13**
1,2,4-Trichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
Naphthalene	ND	UJ	2.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624
1,2,3-Trichlorobenzene	ND		1.0	ug/L	12/08/2022	SW-846 Method 8260 / EPA-624

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Sharon Kennedy	**WO#:** **2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: **2200046-15**

Sample ID: **SVE-5/SVE-6** **Matrix:** **Air** **Sampled:** **12/05/22 16:35**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.04**
Tetrachloroethene	**910**		6.8	ug/m3	12/21/2022	TO-15

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-15

Sample ID: SVE-5/SVE-6 **Matrix: Air** **Sampled: 12/05/22 16:35**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS						**VOC 3230.04**
Propene (Reshot)	ND		0.35	ug/m3	12/28/2022	TO-15
Dichlorodifluoromethane (Reshot)	**11**		1.0	ug/m3	12/28/2022	TO-15
Chloromethane (Reshot)	**0.87**	J	0.42	ug/m3	12/28/2022	TO-15
1,2-Dichlorotetrafluoroethane (Reshot)	ND		1.4	ug/m3	12/28/2022	TO-15
Vinyl Chloride (Reshot)	ND	UJ	0.13	ug/m3	12/28/2022	TO-15
1,3-Butadiene (Reshot)	ND		0.45	ug/m3	12/28/2022	TO-15
Bromomethane (Reshot)	ND		0.78	ug/m3	12/28/2022	TO-15
Chloroethane (Reshot)	ND		0.53	ug/m3	12/28/2022	TO-15
Vinyl Bromide (Reshot)	ND		0.88	ug/m3	12/28/2022	TO-15
Acetone (Reshot)	**10**		0.96	ug/m3	12/28/2022	TO-15
Trichlorofluoromethane (Reshot)	**1.7**		1.1	ug/m3	12/28/2022	TO-15
2-Propanol (Reshot)	**0.73**		0.50	ug/m3	12/28/2022	TO-15
1,1-Dichloroethene (Reshot)	**26**		0.20	ug/m3	12/28/2022	TO-15
Methylene Chloride (Reshot)	ND		0.70	ug/m3	12/28/2022	TO-15
Allyl Chloride (Reshot)	ND		0.32	ug/m3	12/28/2022	TO-15
1,1,2-Trichlorotrifluoroethane (Reshot)	ND		1.5	ug/m3	12/28/2022	TO-15
Carbon Disulfide (Reshot)	ND		0.63	ug/m3	12/28/2022	TO-15
trans-1,2-Dichloroethene (Reshot)	ND		0.20	ug/m3	12/28/2022	TO-15
1,1-Dichloroethane (Reshot)	ND		0.82	ug/m3	12/28/2022	TO-15
Methyl tert-butyl ether (Reshot)	ND		0.73	ug/m3	12/28/2022	TO-15
Vinyl Acetate (Reshot)	**3.7**	J	0.72	ug/m3	12/28/2022	TO-15
2-Butanone (Reshot)	**5.2**		1.9	ug/m3	12/28/2022	TO-15
cis-1,2-Dichloroethene (Reshot)	ND		0.20	ug/m3	12/28/2022	TO-15
Ethyl Acetate (Reshot)	ND		1.1	ug/m3	12/28/2022	TO-15
Hexane (Reshot)	ND		0.71	ug/m3	12/28/2022	TO-15
Chloroform (Reshot)	**0.70**		0.12	ug/m3	12/28/2022	TO-15
Tetrahydrofuran (Reshot)	**2.6**		0.60	ug/m3	12/28/2022	TO-15
1,2-Dichloroethane (Reshot)	ND		0.10	ug/m3	12/28/2022	TO-15
1,1,1-Trichloroethane (Reshot)	**8.9**		1.1	ug/m3	12/28/2022	TO-15
Benzene (Reshot)	**2.2**		0.16	ug/m3	12/28/2022	TO-15
Carbon Tetrachloride (Reshot)	**21**		0.32	ug/m3	12/28/2022	TO-15
Cyclohexane (Reshot)	ND		0.70	ug/m3	12/28/2022	TO-15
1,2-Dichloropropane (Reshot)	ND		0.93	ug/m3	12/28/2022	TO-15
Bromodichloromethane (Reshot)	ND		1.4	ug/m3	12/28/2022	TO-15
1,4-Dioxane (Reshot)	**0.79**		0.73	ug/m3	12/28/2022	TO-15
Trichloroethene (Reshot)	**0.63**		0.14	ug/m3	12/28/2022	TO-15
2,2,4-Trimethylpentane (Reshot)	ND		1.0	ug/m3	12/28/2022	TO-15
Heptane (Reshot)	ND		0.83	ug/m3	12/28/2022	TO-15
cis-1,3-Dichloropropene (Reshot)	ND		0.46	ug/m3	12/28/2022	TO-15
4-Methyl-2-Pentanone (Reshot)	ND		1.7	ug/m3	12/28/2022	TO-15
trans-1,3-Dichloropropene (Reshot)	ND		0.46	ug/m3	12/28/2022	TO-15

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Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Sample Results
(Continued)

Lab ID: 2200046-15 (Continued)

Sample ID: SVE-5/SVE-6 **Matrix: Air** **Sampled: 12/05/22 16:35**

Analyte	Result	Qualifiers/ Comments	MDL / RL	Units	Date Analyzed	Method
Volatile Organic Compounds by GCMS (Continued)						**VOC 3230.04**
1,1,2-Trichloroethane (Reshot)	ND		1.1	ug/m3	12/28/2022	TO-15
Toluene (Reshot)	ND		0.76	ug/m3	12/28/2022	TO-15
2-Hexanone (Reshot)	ND		1.7	ug/m3	12/28/2022	TO-15
Dibromochloromethane (Reshot)	ND		1.7	ug/m3	12/28/2022	TO-15
1,2-Dibromoethane (Reshot)	ND		1.6	ug/m3	12/28/2022	TO-15
Chlorobenzene (Reshot)	ND		0.93	ug/m3	12/28/2022	TO-15
Ethyl Benzene (Reshot)	ND		0.88	ug/m3	12/28/2022	TO-15
m and/or p-Xylene (Reshot)	ND		1.8	ug/m3	12/28/2022	TO-15
Bromoform (Reshot)	ND		2.1	ug/m3	12/28/2022	TO-15
Styrene (Reshot)	ND		0.86	ug/m3	12/28/2022	TO-15
1,1,2,2-Tetrachloroethane (Reshot)	ND		1.4	ug/m3	12/28/2022	TO-15
o-Xylene (Reshot)	ND		0.88	ug/m3	12/28/2022	TO-15
4-Ethyltoluene (Reshot)	ND		4.0	ug/m3	12/28/2022	TO-15
1,3,5-Trimethylbenzene (Reshot)	ND		0.99	ug/m3	12/28/2022	TO-15
1,2,4-Trimethylbenzene (Reshot)	ND		0.99	ug/m3	12/28/2022	TO-15
Benzyl Chloride (Reshot)	ND		4.2	ug/m3	12/28/2022	TO-15
1,3-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/28/2022	TO-15
1,4-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/28/2022	TO-15
1,2-Dichlorobenzene (Reshot)	ND		1.2	ug/m3	12/28/2022	TO-15
1,2,4-Trichlorobenzene (Reshot)	ND		1.5	ug/m3	12/28/2022	TO-15
Hexachlorobutadiene (Reshot)	ND		2.2	ug/m3	12/28/2022	TO-15

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Sharon Kennedy	**WO#:** **2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Certified Analyses included in this Report

Analyte	CAS #	Certifications
TO-15 in Air		***VOC 3230.04***
Propene	115-07-1	ISO
Dichlorodifluoromethane	75-71-8	ISO
Chloromethane	74-87-3	ISO
1,2-Dichlorotetrafluoroethane	76-14-2	ISO
Vinyl Chloride	75-01-4	ISO
1,3-Butadiene	106-99-0	ISO
Bromomethane	74-83-9	ISO
Chloroethane	75-00-3	ISO
Vinyl Bromide	593-60-2	ISO
Acetone	67-64-1	ISO
Trichlorofluoromethane	75-69-4	ISO
2-Propanol	67-63-0	ISO
1,1-Dichloroethene	75-35-4	ISO
Methylene Chloride	75-09-2	ISO
Allyl Chloride	107-05-1	ISO
1,1,2-Trichlorotrifluoroethane	76-13-1	ISO
Carbon Disulfide	75-15-0	ISO
trans-1,2-Dichloroethene	156-60-5	ISO
1,1-Dichloroethane	75-34-3	ISO
Methyl tert-butyl ether	1634-04-4	ISO
Vinyl Acetate	108-05-4	ISO
2-Butanone	78-93-3	ISO
cis-1,2-Dichloroethene	156-59-2	ISO
Ethyl Acetate	141-78-6	ISO
Hexane	110-54-3	ISO
Chloroform	67-66-3	ISO
Tetrahydrofuran	109-99-9	ISO
1,2-Dichloroethane	107-06-2	ISO
1,1,1-Trichloroethane	71-55-6	ISO
Benzene	71-43-2	ISO
Carbon Tetrachloride	56-23-5	ISO
Cyclohexane	110-82-7	ISO
1,2-Dichloropropane	78-87-5	ISO
Bromodichloromethane	75-27-4	ISO
1,4-Dioxane	123-91-1	ISO
Trichloroethene	79-01-6	ISO
2,2,4-Trimethylpentane	540-84-1	ISO
Heptane	142-82-5	ISO
cis-1,3-Dichloropropene	10061-01-5	ISO
4-Methyl-2-Pentanone	108-10-1	ISO
trans-1,3-Dichloropropene	10061-02-6	ISO
1,1,2-Trichloroethane	79-00-5	ISO
Toluene	108-88-3	ISO
2-Hexanone	591-78-6	ISO
Dibromochloromethane	124-48-1	ISO
1,2-Dibromoethane	106-93-4	ISO
Tetrachloroethene	127-18-4	ISO
Chlorobenzene	108-90-7	ISO
Ethyl Benzene	100-41-4	ISO

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Certified Analyses included in this Report
(Continued)

Analyte	CAS #	Certifications
TO-15 in Air (Continued)		***VOC 3230.04***
m and/or p-Xylene	179601-23-1	ISO
Bromoform	75-25-2	ISO
Styrene	100-42-5	ISO
1,1,2,2-Tetrachloroethane	79-34-5	ISO
o-Xylene	95-47-6	ISO
4-Ethyltoluene	622-96-8	ISO
1,3,5-Trimethylbenzene	108-67-8	ISO
1,2,4-Trimethylbenzene	95-63-6	ISO
Benzyl Chloride	100-44-7	ISO
1,3-Dichlorobenzene	541-73-1	ISO
1,4-Dichlorobenzene	106-46-7	ISO
1,2-Dichlorobenzene	95-50-1	ISO
1,2,4-Trichlorobenzene	120-82-1	ISO
Hexachlorobutadiene	87-68-3	ISO
SW-846 Method 8260 / EPA-624 in Water		***VOC 3230.13***
Dichlorodifluoromethane	75-71-8	ISO
Chloromethane	74-87-3	ISO
Vinyl Chloride	75-01-4	ISO
Bromomethane	74-83-9	ISO
Chloroethane	75-00-3	ISO
Trichlorofluoromethane	75-69-4	ISO
1,1,2-Trichlorotrifluoroethane	76-13-1	ISO
1,1-Dichloroethene	75-35-4	ISO
Acetone	67-64-1	ISO
Carbon Disulfide	75-15-0	ISO
Methyl Acetate	79-20-9	ISO
Methyl tert-butyl ether	1634-04-4	ISO
Methylene Chloride	75-09-2	ISO
trans-1,2-Dichloroethene	156-60-5	ISO
1,1-Dichloroethane	75-34-3	ISO
2-Butanone	78-93-3	ISO
cis-1,2-Dichloroethene	156-59-2	ISO
Chloroform	67-66-3	ISO
1,1,1-Trichloroethane	71-55-6	ISO
Cyclohexane	110-82-7	ISO
Carbon Tetrachloride	56-23-5	ISO
Benzene	71-43-2	ISO
1,2-Dichloroethane	107-06-2	ISO
Trichloroethene	79-01-6	ISO
Methylcyclohexane	108-87-2	ISO
1,2-Dichloropropane	78-87-5	ISO
Bromodichloromethane	75-27-4	ISO
cis-1,3-Dichloropropene	10061-01-5	ISO
4-Methyl-2-Pentanone	108-10-1	ISO
Toluene	108-88-3	ISO
trans-1,3-Dichloropropene	10061-02-6	ISO
1,1,2-Trichloroethane	79-00-5	ISO

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Certified Analyses included in this Report
(Continued)

Analyte	CAS #	Certifications
SW-846 Method 8260 / EPA-624 in Water (Continued)		***VOC 3230.13***
Tetrachloroethene	127-18-4	ISO
2-Hexanone	591-78-6	ISO
Dibromochloromethane	124-48-1	ISO
1,2-Dibromoethane	106-93-4	ISO
Chlorobenzene	108-90-7	ISO
Ethyl Benzene	100-41-4	ISO
m and/or p-Xylene	179601-23-1	ISO
o-Xylene	95-47-6	ISO
Styrene	100-42-5	ISO
Bromoform	75-25-2	ISO
Isopropylbenzene	98-82-8	ISO
1,1,2,2-Tetrachloroethane	79-34-5	ISO
1,3-Dichlorobenzene	541-73-1	ISO
1,4-Dichlorobenzene	106-46-7	ISO
1,2-Dichlorobenzene	95-50-1	ISO
1,2-Dibromo-3-Chloropropane	96-12-8	ISO
1,2,4-Trichlorobenzene	120-82-1	ISO
Naphthalene	91-20-3	ISO
1,2,3-Trichlorobenzene	87-61-6	ISO

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List of Certifications

Code	Description	Number	Expires
ISO Mobile	ISO/IEC 17025:2017 - Environmental Testing	L22-243	03/31/2024
ISO	ISO/IEC 17025:2017 - Environmental Testing	L22-243	03/31/2024

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Explanation of Qualifiers used on this report

Item	Definition
J	The identification of the analyte is acceptable, the reported value is an estimate.
UJ	The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
Dry	Sample results reported on a dry weight basis.
ND	Analyte NOT DETECTED at or above the reporting limit.
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.

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Explanation of Units used on this report

Units	Description
%	Percent
[blank]	
boat	Milestone boat
Deg C	Degrees Celcius
g	Grams
g/min	Gallons per Minute
mg	Milligrams
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
mL	Milliliters
mL/L/hr	Milliliters per Liter per Hour
mm	Millimeters
mm/sec	Millimeters per second
MPN/100mL	Most Probable Number per One Hundred Milliliters
mV	Millivolts
ng	Nanograms
ng/kg	Nanograms per Kilogram
ng/L	Nanograms per Liter
NTU	Nephelometric Turbidity Unit
P/A	Presence/Absence
pg/cm2	Picograms per Square Centimeter
pg/L	Picograms per Liter
pg/m3	Picograms per Cubic Meter
SU	Standard Unit
ug/cm2	Micrograms per Square Centimeter
ug/kg	Micrograms per Kilogram
ug/L	Micrograms per Liter
ug/m3	Micrograms per Cubic Meter
ug/mL	Micrograms per Milliliter
uL	Microliters
umhos/cm	Micromhos per Centimeter
umoles/g	Micromoles per Gram
uS/cm	Microsiemens per Centimeter

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Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified)
			VERSION 6.22:1002
	VOC 3230.13	(Water)	H-Flags used
2200046-01RE1	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.
2200046-01RE1	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-01RE1	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-01RE1	VOC 3230.04	1,2-Dichlorotetrafluoroethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-01RE1	VOC 3230.04	Chloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-01RE1	VOC 3230.04	trans-1,3-Dichloropropene	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-01RE1	VOC 3230.04	Vinyl Acetate	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-01RE1	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.
2200046-01RE1	VOC 3230.04	Vinyl Chloride	SSV-02: Second Source Calibration Verification was less than the method specified limit.
2200046-01RE1	VOC 3230.04	Vinyl Chloride	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-02RE1	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.
2200046-02RE1	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-02RE1	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-02RE1	VOC 3230.04	1,2-Dichlorotetrafluoroethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-02RE1	VOC 3230.04	Chloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-02RE1	VOC 3230.04	trans-1,3-Dichloropropene	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-02RE1	VOC 3230.04	Vinyl Acetate	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-02RE1	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.
2200046-02RE1	VOC 3230.04	Vinyl Chloride	SSV-02: Second Source Calibration Verification was less than the method specified limit.
2200046-02RE1	VOC 3230.04	Vinyl Chloride	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-03	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.
2200046-03	VOC 3230.04	Vinyl Chloride	ICL-01: Initial calibration did not meet method specified limits.
2200046-03	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-03	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-03	VOC 3230.04	Vinyl Chloride	LCS-02: Laboratory Control Sample recovery was less than the established control limit.
2200046-03	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.

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Items for Project Manager Review
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LabNumber	Analysis	Analyte	Exception
2200046-03	VOC 3230.04	Vinyl Chloride	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-04RE1	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.
2200046-04RE1	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-04RE1	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-04RE1	VOC 3230.04	1,2-Dichlorotetrafluoroethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-04RE1	VOC 3230.04	Chloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-04RE1	VOC 3230.04	trans-1,3-Dichloropropene	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-04RE1	VOC 3230.04	Vinyl Acetate	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-04RE1	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.
2200046-04RE1	VOC 3230.04	Vinyl Chloride	SSV-02: Second Source Calibration Verification was less than the method specified limit.
2200046-04RE1	VOC 3230.04	Vinyl Chloride	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-05RE1	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.
2200046-05RE1	VOC 3230.04	4-Bromofluorobenzene	Exceeds upper control limit
2200046-05RE1	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-05RE1	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-05RE1	VOC 3230.04	1,2-Dichlorotetrafluoroethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-05RE1	VOC 3230.04	Chloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-05RE1	VOC 3230.04	trans-1,3-Dichloropropene	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-05RE1	VOC 3230.04	Vinyl Acetate	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-05RE1	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.
2200046-05RE1	VOC 3230.04	Vinyl Chloride	SSV-02: Second Source Calibration Verification was less than the method specified limit.
2200046-05RE1	VOC 3230.04	Vinyl Chloride	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-06	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.
2200046-06	VOC 3230.04	Vinyl Chloride	ICL-01: Initial calibration did not meet method specified limits.
2200046-06	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-06	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-06	VOC 3230.04	Vinyl Chloride	LCS-02: Laboratory Control Sample recovery was less than the established control limit.
2200046-06	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.

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LabNumber	Analysis	Analyte	Exception
2200046-06	VOC 3230.04	Vinyl Chloride	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-07	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.
2200046-07	VOC 3230.04	Vinyl Chloride	ICL-01: Initial calibration did not meet method specified limits.
2200046-07	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-07	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-07	VOC 3230.04	Vinyl Chloride	LCS-02: Laboratory Control Sample recovery was less than the established control limit.
2200046-07	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.
2200046-07	VOC 3230.04	Vinyl Chloride	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-08	VOC 3230.13	Dichlorodifluoromethane	CCV-02: Continuing Calibration Verification was less than the method specified limit.
2200046-08	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
2200046-08	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
2200046-08	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
2200046-08	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-08	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-08	VOC 3230.13	4-Methyl-2-Pentanone	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-08	VOC 3230.13	1,2-Dibromo-3-Chloropropane	MSB-01: Matrix Spike and/or Matrix Spike Duplicate recovery was greater than the established control limit.
2200046-08	VOC 3230.13	trans-1,3-Dichloropropene	MSB-01: Matrix Spike and/or Matrix Spike Duplicate recovery was greater than the established control limit.
2200046-08	VOC 3230.13	Dichlorodifluoromethane	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-08	VOC 3230.13	Naphthalene	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-08RE1	VOC 3230.13	Tetrachloroethene	MSB-05: Matrix Spiked and Matrix Spike Duplicate were spiked at a concentration significantly lower than the concentration found in the original sample. Spike recoveries were not used to evaluate data quality.
2200046-09	VOC 3230.13	Dichlorodifluoromethane	CCV-02: Continuing Calibration Verification was less than the method specified limit.
2200046-09	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
2200046-09	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
2200046-09	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
2200046-09	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-09	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-09	VOC 3230.13	4-Methyl-2-Pentanone	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-09	VOC 3230.13	Dichlorodifluoromethane	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.

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LabNumber	Analysis	Analyte	Exception
2200046-09	VOC 3230.13	Naphthalene	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-10	VOC 3230.13	Dichlorodifluoromethane	CCV-02: Continuing Calibration Verification was less than the method specified limit.
2200046-10	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
2200046-10	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
2200046-10	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
2200046-10	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-10	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-10	VOC 3230.13	4-Methyl-2-Pentanone	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-10	VOC 3230.13	Dichlorodifluoromethane	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-10	VOC 3230.13	Naphthalene	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-11	VOC 3230.13	Dichlorodifluoromethane	CCV-02: Continuing Calibration Verification was less than the method specified limit.
2200046-11	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
2200046-11	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
2200046-11	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
2200046-11	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-11	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-11	VOC 3230.13	4-Methyl-2-Pentanone	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-11	VOC 3230.13	Dichlorodifluoromethane	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-11	VOC 3230.13	Naphthalene	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-12	VOC 3230.13	Dichlorodifluoromethane	CCV-02: Continuing Calibration Verification was less than the method specified limit.
2200046-12	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
2200046-12	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
2200046-12	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
2200046-12	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-12	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-12	VOC 3230.13	4-Methyl-2-Pentanone	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-12	VOC 3230.13	Dichlorodifluoromethane	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-12	VOC 3230.13	Naphthalene	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-13	VOC 3230.13	Dichlorodifluoromethane	CCV-02: Continuing Calibration Verification was less than the method specified limit.

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LabNumber	Analysis	Analyte	Exception
2200046-13	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
2200046-13	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
2200046-13	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
2200046-13	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-13	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-13	VOC 3230.13	4-Methyl-2-Pentanone	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-13	VOC 3230.13	Dichlorodifluoromethane	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-13	VOC 3230.13	Naphthalene	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-14	VOC 3230.13	Dichlorodifluoromethane	CCV-02: Continuing Calibration Verification was less than the method specified limit.
2200046-14	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
2200046-14	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
2200046-14	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
2200046-14	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-14	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-14	VOC 3230.13	4-Methyl-2-Pentanone	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-14	VOC 3230.13	Dichlorodifluoromethane	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-14	VOC 3230.13	Naphthalene	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
2200046-15RE1	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.
2200046-15RE1	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-15RE1	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
2200046-15RE1	VOC 3230.04	1,2-Dichlorotetrafluoroethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-15RE1	VOC 3230.04	Chloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-15RE1	VOC 3230.04	trans-1,3-Dichloropropene	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-15RE1	VOC 3230.04	Vinyl Acetate	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
2200046-15RE1	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.
2200046-15RE1	VOC 3230.04	Vinyl Chloride	SSV-02: Second Source Calibration Verification was less than the method specified limit.
2200046-15RE1	VOC 3230.04	Vinyl Chloride	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
B22L036-BLK1	VOC 3230.13	Dichlorodifluoromethane	CCV-02: Continuing Calibration Verification was less than the method specified limit.

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Items for Project Manager Review
(Continued)

LabNumber	Analysis	Analyte	Exception
B22L036-BLK1	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
B22L036-BLK1	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L036-BLK1	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L036-BLK1	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L036-BLK1	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L036-BLK1	VOC 3230.13	4-Methyl-2-Pentanone	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L036-BLK1	VOC 3230.13	Dichlorodifluoromethane	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
B22L036-BLK1	VOC 3230.13	Naphthalene	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
B22L036-BS1	VOC 3230.13	Dichlorodifluoromethane	CCV-02: Continuing Calibration Verification was less than the method specified limit.
B22L036-BS1	VOC 3230.13	4-Methyl-2-Pentanone	Exceeds upper control limit
B22L036-BS1	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
B22L036-BS1	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L036-BS1	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L036-BS1	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L036-BS1	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L036-MS1	VOC 3230.13	Dichlorodifluoromethane	CCV-02: Continuing Calibration Verification was less than the method specified limit.
B22L036-MS1	VOC 3230.13	1,2-Dibromo-3-Chloropropane	Exceeds upper control limit
B22L036-MS1	VOC 3230.13	Tetrachloroethene	Exceeds upper control limit
B22L036-MS1	VOC 3230.13	trans-1,3-Dichloropropene	Exceeds upper control limit
B22L036-MS1	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
B22L036-MS1	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L036-MS1	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L036-MS1	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L036-MS1	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L036-MS1	VOC 3230.13	Tetrachloroethene	ICL-07: Sample result concentration greater than the highest standard for the initial calibration.
B22L036-MS1	VOC 3230.13	4-Methyl-2-Pentanone	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L036-MS1	VOC 3230.13	Tetrachloroethene	MSB-05: Matrix Spiked and Matrix Spike Duplicate were spiked at a concentration significantly lower than the concentration found in the original sample. Spike recoveries were not used to evaluate data quality.
B22L036-MSD1	VOC 3230.13	Dichlorodifluoromethane	CCV-02: Continuing Calibration Verification was less than the method specified limit.
B22L036-MSD1	VOC 3230.13	1,2-Dibromo-3-Chloropropane	Exceeds upper control limit
B22L036-MSD1	VOC 3230.13	Tetrachloroethene	Exceeds upper control limit
B22L036-MSD1	VOC 3230.13	trans-1,3-Dichloropropene	Exceeds upper control limit

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Items for Project Manager Review
(Continued)

LabNumber	Analysis	Analyte	Exception
B22L036-MSD1	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
B22L036-MSD1	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L036-MSD1	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L036-MSD1	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L036-MSD1	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L036-MSD1	VOC 3230.13	Tetrachloroethene	ICL-07: Sample result concentration greater than the highest standard for the initial calibration.
B22L036-MSD1	VOC 3230.13	4-Methyl-2-Pentanone	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L036-MSD1	VOC 3230.13	Tetrachloroethene	MSB-05: Matrix Spiked and Matrix Spike Duplicate were spiked at a concentration significantly lower than the concentration found in the original sample. Spike recoveries were not used to evaluate data quality.
B22L050-BLK1	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
B22L050-BLK1	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-BLK1	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-BLK1	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-BLK1	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-BLK1	VOC 3230.13	Bromodichloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-BLK1	VOC 3230.13	Naphthalene	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
B22L050-BLK2	VOC 3230.13	Chloroethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L050-BLK2	VOC 3230.13	Trichlorofluoromethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L050-BLK2	VOC 3230.13	Acetone	CCV-02: Continuing Calibration Verification was less than the method specified limit.
B22L050-BLK2	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
B22L050-BLK2	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-BLK2	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-BLK2	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-BLK2	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-BLK2	VOC 3230.13	1,2-Dichloroethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-BLK2	VOC 3230.13	Bromodichloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-BLK2	VOC 3230.13	o-Xylene	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-BLK2	VOC 3230.13	Acetone	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
B22L050-BLK2	VOC 3230.13	Naphthalene	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Items for Project Manager Review
(Continued)

LabNumber	Analysis	Analyte	Exception
B22L050-BLK3	VOC 3230.13	Isopropylbenzene	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L050-BLK3	VOC 3230.13	Trichlorofluoromethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L050-BLK3	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
B22L050-BLK3	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-BLK3	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-BLK3	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-BLK3	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-BLK3	VOC 3230.13	Isopropylbenzene	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-BLK3	VOC 3230.13	Acetone	LCS-02: Laboratory Control Sample recovery was less than the established control limit.
B22L050-BLK3	VOC 3230.13	Acetone	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
B22L050-BLK3	VOC 3230.13	Naphthalene	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
B22L050-BS1	VOC 3230.13	Bromodichloromethane	Exceeds upper control limit
B22L050-BS1	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
B22L050-BS1	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-BS1	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-BS1	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-BS1	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-BS2	VOC 3230.13	Chloroethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L050-BS2	VOC 3230.13	Trichlorofluoromethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L050-BS2	VOC 3230.13	Acetone	CCV-02: Continuing Calibration Verification was less than the method specified limit.
B22L050-BS2	VOC 3230.13	1,2-Dichloroethane	Exceeds upper control limit
B22L050-BS2	VOC 3230.13	Bromodichloromethane	Exceeds upper control limit
B22L050-BS2	VOC 3230.13	o-Xylene	Exceeds upper control limit
B22L050-BS2	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
B22L050-BS2	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-BS2	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-BS2	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-BS2	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-BS2	VOC 3230.13	1,2-Dichloroethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-BS2	VOC 3230.13	Bromodichloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Items for Project Manager Review
(Continued)

LabNumber	Analysis	Analyte	Exception
B22L050-BS2	VOC 3230.13	o-Xylene	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-BS3	VOC 3230.13	Isopropylbenzene	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L050-BS3	VOC 3230.13	Trichlorofluoromethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L050-BS3	VOC 3230.13	Acetone	Exceeds lower control limit
B22L050-BS3	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
B22L050-BS3	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-BS3	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-BS3	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-BS3	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-MS1	VOC 3230.13	Methylene Chloride	BLK-02: Slight contamination was found in the method blank. The concentration found in the sample is greater than 10x the contamination level in the blank and is reported without being qualified.
B22L050-MS1	VOC 3230.13	Bromodichloromethane	Exceeds upper control limit
B22L050-MS1	VOC 3230.13	Isopropylbenzene	Exceeds upper control limit
B22L050-MS1	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
B22L050-MS1	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-MS1	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-MS1	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-MS1	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-MS1	VOC 3230.13	Bromodichloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-MS2	VOC 3230.13	Methylene Chloride	BLK-02: Slight contamination was found in the method blank. The concentration found in the sample is greater than 10x the contamination level in the blank and is reported without being qualified.
B22L050-MS2	VOC 3230.13	Chloroethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L050-MS2	VOC 3230.13	Trichlorofluoromethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L050-MS2	VOC 3230.13	Acetone	CCV-02: Continuing Calibration Verification was less than the method specified limit.
B22L050-MS2	VOC 3230.13	Carbon Tetrachloride	Exceeds lower control limit
B22L050-MS2	VOC 3230.13	1,2-Dichloroethane	Exceeds upper control limit
B22L050-MS2	VOC 3230.13	Acetone	Exceeds upper control limit
B22L050-MS2	VOC 3230.13	Bromodichloromethane	Exceeds upper control limit
B22L050-MS2	VOC 3230.13	Isopropylbenzene	Exceeds upper control limit
B22L050-MS2	VOC 3230.13	Methylene Chloride	Exceeds upper control limit
B22L050-MS2	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
B22L050-MS2	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-MS2	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Items for Project Manager Review
(Continued)

LabNumber	Analysis	Analyte	Exception
B22L050-MS2	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-MS2	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-MS2	VOC 3230.13	Acetone	ICL-07: Sample result concentration greater than the highest standard for the initial calibration.
B22L050-MS2	VOC 3230.13	1,2-Dichloroethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-MS2	VOC 3230.13	Bromodichloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-MS2	VOC 3230.13	o-Xylene	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-MS2	VOC 3230.13	Acetone	MSB-05: Matrix Spiked and Matrix Spike Duplicate were spiked at a concentration significantly lower than the concentration found in the original sample. Spike recoveries were not used to evaluate data quality.
B22L050-MS2	VOC 3230.13	Methylene Chloride	MSB-05: Matrix Spiked and Matrix Spike Duplicate were spiked at a concentration significantly lower than the concentration found in the original sample. Spike recoveries were not used to evaluate data quality.
B22L050-MSD1	VOC 3230.13	Methylene Chloride	BLK-02: Slight contamination was found in the method blank. The concentration found in the sample is greater than 10x the contamination level in the blank and is reported without being qualified.
B22L050-MSD1	VOC 3230.13	Bromodichloromethane	Exceeds upper control limit
B22L050-MSD1	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
B22L050-MSD1	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-MSD1	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-MSD1	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-MSD1	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-MSD1	VOC 3230.13	Bromodichloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-MSD2	VOC 3230.13	Methylene Chloride	BLK-02: Slight contamination was found in the method blank. The concentration found in the sample is greater than 10x the contamination level in the blank and is reported without being qualified.
B22L050-MSD2	VOC 3230.13	Chloroethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L050-MSD2	VOC 3230.13	Trichlorofluoromethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L050-MSD2	VOC 3230.13	Acetone	CCV-02: Continuing Calibration Verification was less than the method specified limit.
B22L050-MSD2	VOC 3230.13	Carbon Tetrachloride	Exceeds lower control limit
B22L050-MSD2	VOC 3230.13	Acetone	Exceeds upper control limit
B22L050-MSD2	VOC 3230.13	Methylene Chloride	Exceeds upper control limit
B22L050-MSD2	VOC 3230.13	Naphthalene	ICL-01: Initial calibration did not meet method specified limits.
B22L050-MSD2	VOC 3230.13	Acetone	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.
B22L050-MSD2	VOC 3230.13	Naphthalene	ICL-05: Initial calibration range was modified. The lowest standard(s) were dropped. The Reporting Limit is not affected.

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Sharon Kennedy
R7 Superfund and Emergency Management
SEMD/AERR/RREP

WO#: **2200046**
Project ID: SKA76N00
Project: West Highway 6 and Highway 281

Reported:
01/05/2023 09:40

Items for Project Manager Review
(Continued)

LabNumber	Analysis	Analyte	Exception
B22L050-MSD2	VOC 3230.13	1,2,4-Trichlorobenzene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-MSD2	VOC 3230.13	Naphthalene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L050-MSD2	VOC 3230.13	Acetone	ICL-07: Sample result concentration greater than the highest standard for the initial calibration.
B22L050-MSD2	VOC 3230.13	1,2-Dichloroethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-MSD2	VOC 3230.13	Bromodichloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-MSD2	VOC 3230.13	o-Xylene	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L050-MSD2	VOC 3230.13	Acetone	MSB-05: Matrix Spiked and Matrix Spike Duplicate were spiked at a concentration significantly lower than the concentration found in the original sample. Spike recoveries were not used to evaluate data quality.
B22L050-MSD2	VOC 3230.13	Methylene Chloride	MSB-05: Matrix Spiked and Matrix Spike Duplicate were spiked at a concentration significantly lower than the concentration found in the original sample. Spike recoveries were not used to evaluate data quality.
B22L092-BLK1	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.
B22L092-BLK1	VOC 3230.04	Vinyl Chloride	ICL-01: Initial calibration did not meet method specified limits.
B22L092-BLK1	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L092-BLK1	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L092-BLK1	VOC 3230.04	Vinyl Chloride	LCS-02: Laboratory Control Sample recovery was less than the established control limit.
B22L092-BLK1	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.
B22L092-BLK1	VOC 3230.04	Vinyl Chloride	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
B22L092-BS1	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.
B22L092-BS1	VOC 3230.04	Vinyl Chloride	Exceeds lower control limit
B22L092-BS1	VOC 3230.04	Vinyl Chloride	ICL-01: Initial calibration did not meet method specified limits.
B22L092-BS1	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L092-BS1	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L092-BS1	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.
B22L114-BLK1	VOC 3230.04	Chloromethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L114-BLK1	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.
B22L114-BLK1	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L114-BLK1	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L114-BLK1	VOC 3230.04	1,2-Dichlorotetrafluoroethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L114-BLK1	VOC 3230.04	Chloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Items for Project Manager Review
(Continued)

LabNumber	Analysis	Analyte	Exception
B22L114-BLK1	VOC 3230.04	trans-1,3-Dichloropropene	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L114-BLK1	VOC 3230.04	Vinyl Acetate	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L114-BLK1	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.
B22L114-BLK1	VOC 3230.04	Vinyl Chloride	SSV-02: Second Source Calibration Verification was less than the method specified limit.
B22L114-BLK1	VOC 3230.04	Vinyl Chloride	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
B22L114-BLK2	VOC 3230.04	Chloromethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L114-BLK2	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.
B22L114-BLK2	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L114-BLK2	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L114-BLK2	VOC 3230.04	1,2-Dichlorotetrafluoroethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L114-BLK2	VOC 3230.04	Chloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L114-BLK2	VOC 3230.04	trans-1,3-Dichloropropene	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L114-BLK2	VOC 3230.04	Vinyl Acetate	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L114-BLK2	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.
B22L114-BLK2	VOC 3230.04	Vinyl Chloride	SSV-02: Second Source Calibration Verification was less than the method specified limit.
B22L114-BLK2	VOC 3230.04	Vinyl Chloride	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.
B22L114-BS1	VOC 3230.04	Chloromethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L114-BS1	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.
B22L114-BS1	VOC 3230.04	1,2-Dichlorotetrafluoroethane	Exceeds upper control limit
B22L114-BS1	VOC 3230.04	Chloromethane	Exceeds upper control limit
B22L114-BS1	VOC 3230.04	trans-1,3-Dichloropropene	Exceeds upper control limit
B22L114-BS1	VOC 3230.04	Vinyl Acetate	Exceeds upper control limit
B22L114-BS1	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L114-BS1	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L114-BS1	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.
B22L114-BS1	VOC 3230.04	Vinyl Chloride	SSV-02: Second Source Calibration Verification was less than the method specified limit.
B22L114-BS2	VOC 3230.04	Chloromethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L114-BS2	VOC 3230.04	Hexachlorobutadiene	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L114-BS2	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue Kansas City, KS 66101

Sharon Kennedy	**WO#: 2200046**	
R7 Superfund and Emergency Management	Project ID: SKA76N00	**Reported:**
SEMD/AERR/RREP	Project: West Highway 6 and Highway 281	01/05/2023 09:40

Items for Project Manager Review
(Continued)

LabNumber	Analysis	Analyte	Exception
B22L114-BS2	VOC 3230.04	1,2-Dichlorotetrafluoroethane	Exceeds upper control limit
B22L114-BS2	VOC 3230.04	Chloromethane	Exceeds upper control limit
B22L114-BS2	VOC 3230.04	trans-1,3-Dichloropropene	Exceeds upper control limit
B22L114-BS2	VOC 3230.04	Vinyl Acetate	Exceeds upper control limit
B22L114-BS2	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L114-BS2	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L114-BS2	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.
B22L114-BS2	VOC 3230.04	Vinyl Chloride	SSV-02: Second Source Calibration Verification was less than the method specified limit.
B22L114-DUP1	VOC 3230.04	Chloromethane	CCV-01: Continuing Calibration Verification was greater than the method specified limit.
B22L114-DUP1	VOC 3230.04	Vinyl Chloride	CCV-02: Continuing Calibration Verification was less than the method specified limit.
B22L114-DUP1	VOC 3230.04	1,3-Butadiene	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L114-DUP1	VOC 3230.04	Vinyl Chloride	ICL-06: Initial calibration range was modified. The highest standard(s) were dropped.
B22L114-DUP1	VOC 3230.04	1,2-Dichlorotetrafluoroethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L114-DUP1	VOC 3230.04	Chloromethane	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L114-DUP1	VOC 3230.04	trans-1,3-Dichloropropene	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L114-DUP1	VOC 3230.04	Vinyl Acetate	LCS-01: Laboratory Control Sample recovery was greater than the established control limit.
B22L114-DUP1	VOC 3230.04	trans-1,3-Dichloropropene	SSV-01: Second Source Calibration Verification was greater than the method specified limit.
B22L114-DUP1	VOC 3230.04	Vinyl Chloride	SSV-02: Second Source Calibration Verification was less than the method specified limit.
B22L114-DUP1	VOC 3230.04	Vinyl Chloride	UJ: The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII

EPA PROJECT MANAGER (Print)	SITE OR SAMPLING EVENT	DATE OF SAMPLE COLLECTION(S)	COC PAGE
Justin Barker	West Hwy. 6 & Hwy. 281	12 (MONTH) 05-06 (DAY) 2022 (YEAR)	1 of 1

CONTENTS OF SHIPMENT

WORK ORDER (WO) AND SAMPLE NUMBER (e.g. 2200058-01)	TYPE OF CONTAINERS: 1 L PLASTIC BOTTLE	6L Summa CANISTER	BOTTLE	BOTTLE	VOA SET (3 VIALS EA)	SAMPLED MEDIA: WATER	SOLID	NAS WASTE	AIR	OTHER	RECEIVING LABORATORY REMARKS OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)
	NUMBER(S) OF CONTAINERS PER SAMPLE NUMBER										
2200046-01		1							✓		
2200046-02		1							✓		
2200046-03		1							✓		
2200046-04		1							✓		
2200046-05		1							✓		
2200046-06		1							✓		
2200046-07		1							✓		
2200046-08					3	✓					
2200046-09					1	✓					
2200046-10					1	✓					
2200046-11					1	✓					
2200046-12					1	✓					
2200046-13					1	✓					
2200046-14					1	✓					
2200046-15		1							✓		
											WO Complete
											nr12/7/22
											Cooler & air canister crates hand-delivered
											to the STC. No temp. needed on the air canister
											crates & cooler rec'd w/temp. range of 5.4-6.8degC.

DESCRIPTION OF SHIPMENT

17 CONTAINER(S) CONSISTING OF 2 CRATE(S)

1 ICE CHEST(S): OTHER w/WO 2200043 nr12/7/22

MODE OF SHIPMENT

☐ COMMERCIAL CARRIER _____

☑ SAMPLER CONVEYED _____ (SHIPPING AIRBILL NUMBER)

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (PM/SAMPLER)	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
Ted Faile — Digitally signed by Ted Faile Date: 2022.12.07 09:36:27 -06'00'	NICOLE ROBLEZ — Digitally signed by NICOLE ROBLEZ Date: 2022.12.07 12:30:06 -06'00'	STC Analyses
○ SEALED ○ UNSEALED ◉	○ SEALED ◉ UNSEALED	
RELINQUISHED BY (PM/SAMPLER)	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
○ SEALED ○ UNSEALED	○ SEALED ○ UNSEALED	
RELINQUISHED BY (PM/SAMPLER)	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
○ SEALED ○ UNSEALED	○ SEALED ○ UNSEALED	
RELINQUISHED BY (PM/SAMPLER)	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
○ SEALED ○ UNSEALED	○ SEALED ○ UNSEALED	

7-EPA-6282 (REV 4/17)

APPENDIX C

HISTORICAL DATA TABLES

TABLE C-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
WEST HIGHWAY 6 AND HIGHWAY 281 SITE
HASTINGS, NEBRASKA

Sample Location	Sample Date	Analyte (µg/L)			
		PCE	TCE	1,1,1-TCA	1,1-DCE
MCL		5	5	200	7
Recovery Well # 1	10/18/2002	7,100	1.0	13	7
	11/6/02-A	9,700	6.0	16	13
	11/6/02-B	6,500	18	20	14
	11/7/02-D	10,000	2.0	18	14
	11/8/02-D	12,000	2.0	21	16
	11/8/02-E	13,000	2.0	23	18
	12/22/2003	31,684	5.0 U	90	67
	1/20/2004	28,994	5.0 U	90	69
	3/3/2004	27,568	5.0 U	81	64
	11/9/2004	11,334	5.0 U	27	5.0 U
	11/18/2004	12,000	1.3 J	49 J	34 J
	2/2/2005	8,820	5.0 U	23	5.0 U
	10/21/2005	6,900	1.0 U	22	1.0 U
	7/20/2006	7,500	50 U	50 U	50 U
	10/18/2006	8,000	5.0 U	5.0 U	5.0 U
	3/23/2007	370	5.0 U	5.0 U	5.0 U
	8/14/2007	8,400	5.0 U	5.0 U	5.0 U
	11/5/2008	3,200	5.0 U	5.0 U	5.0 U
	3/24/2009	2,800	5.0 U	5.0 U	5.0 U
	7/9/2009	3,300	5.0 U	5.0 U	5.0 U
	10/27/2009	3,100	5.0 U	5.0 U	5.0 U
	1/5/2010	2,600	5.0 U	5.0 UJ	5.0 U
	4/28/2010	2,900	5.0 U	5.0 U	5.0 U
	8/3/2010	2,100	5.0 U	5.0 U	5.0 U
	10/26/2010	2,100	5.0 U	5.0 UJ	5.0 U
	1/24/2011	510	5.0 U	5.0 U	5.0 U
	4/19/2011	2,100	5.0 U	5.0 U	5.0 U
	7/19/2011	2,300	5.0 U	5.0 U	5.0 U
	3/12/2012	4,500	1.0 U	1.0 U	1.0 U
	6/11/2012	1,500	5.0 U	5.0 U	5.0 U
	9/17/2012	1,900	5.0 U	5.0 U	5.0 U
	12/4/2012	1,900	5.0 U	5.0 U	5.0 U
	3/6/2013	660	5.0 U	5.0 U	5.0 U
	6/3/2013	1,800	5.0 U	5.0 U	5.0 UJ
	9/10/2013	NS	NS	NS	NS
	12/10/2013	2,000	5.0 U	5.0 U	5.0 U
	3/28/2014	1,600	5.0 U	5.0 U	5.0 U
	6/25/2014	2,000	100 U	100 U	100 U
	9/23/2014	1,500	5.0 U	5.0 U	5.0 U
	12/16/2014	1,600	5.0 U	5.0 U	5.0 U
	4/8/2015	1,800	5.0 U	5.0 U	5.0 U
	7/21/2015	1,800	5.0 U	5.0 U	5.0 U
	10/6//2015	1,600	5.0 U	5.0 U	5.0 U
	1/27/2016	1,800	5.0 U	5.0 UJ	5.0 U
	4/25/2016	1,900	5.0 U	5.0 U	5.0 U
	7/27/2016	1,400	5.0 U	5.0 U	5.0 U
	11/17/2016	1,700	5.0 U	5.0 U	5.0 U
	2/8/2017	1,600	5.0 U	5.0 U	5.0 U
	4/24/2017	3,400	5.0 U	5.0 U	5.0 U
	7/26/2017	1,500	5.0 U	5.0 U	5.0 U
	11/8/2017	1,200	5.0 U	5.0 U	5.0 U
	2/6/2018	1,600	0.50 U	0.50 U	0.50 U
	4/17/2018	1,500	0.50 U	0.50 U	0.50 U
	7/25/2018	1,900	1.0 U	1.0 U	1.0 U
	10/24/2018	1,700	1.0 U	1.0 U	1.0 U
	5/28/2019	2,200	1.0 U	1.0 UJ	1.0 U
	9/3/2019	1,400	1.0 U	1.0 U	1.0 U
	11/20/2019	1,500	25 U	25 U	25 U
	3/4/2020	1,400	1.0 U	1.0 U	1.0 U
	6/2/2020	1,200	1.0 U	1.0 U	1.0 UJ
	8/24/2020	1,300	1.0 U	1.0 U	1.0 U
	12/15/2020	1,600	0.50 U	0.50 U	0.50 U
	3/23/2021	1,300	1.0 U	1.0 U	1.0 U
	6/22/2021	1400 J	0.50 U	0.50 U	0.50 U
	9/21/2021	920 J	1.0 UJ	1.0 UJ	1.0 UJ

TABLE C-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
WEST HIGHWAY 6 AND HIGHWAY 281 SITE
HASTINGS, NEBRASKA

Sample Location	Sample Date	Analyte (µg/L)			
		PCE	TCE	1,1,1-TCA	1,1-DCE
MCL		5	5	200	7
Recovery Well # 1	12/7/2021	1,200	1.0 U	1.0 U	1.0 U
	3/22/2022	880	1.0 UJ	1.0 U	1.0 UJ
	6/21/2022	720	1.0 U	1.0 U	1.0 U
	9/20/2022	1,000	1.0 U	1.0 U	1.0 U
	12/6/2022	1,300	1.0 U	1.0 U	1.0 U
Recovery Well # 2	11/9/2004	13,296	5.0 U	9.0	11
	11/18/2004	15,000	2.2 J	22 J	15 J
	2/3/2005	9,941	5.0 U	5.0 U	10
	10/21/2005	2,800	1.0 U	4.5	3.2
	7/20/2006	790	5.0 U	5.0 U	5.0 U
	10/18/2006	880	5.0 U	5.0 U	5.0 U
	3/23/2007	180	5.0 U	5.0 U	5.0 U
	8/14/2007	420	5.0 U	5.0 U	5.0 U
	11/5/2008	120	5.0 U	5.0 U	5.0 U
	3/24/2009	120	5.0 U	5.0 U	5.0 U
	7/9/2009	74	5.0 U	5.0 U	5.0 U
	10/27/2009	79	5.0 U	5.0 U	5.0 U
	1/5/2010	55	5.0 U	5.0 U	5.0 U
	4/28/2010	54	5.0 U	5.0 U	5.0 U
	8/3/2010	45	5.0 U	5.0 U	5.0 U
	10/26/2010	45	5.0 U	5.0 UJ	5.0 U
	1/24/2011	15	5.0 U	5.0 U	5.0 U
	4/19/2011	43	5.0 U	5.0 U	5.0 U
	7/19/2011	32	5.0 U	5.0 U	5.0 U
	3/12/2012	32	1.0 U	1.0 U	1.0 U
	6/11/2012	23	10 U	10 U	10 U
	9/17/2012	25	5.0 U	5.0 U	5.0 U
	12/4/2012	23	5.0 U	5.0 U	5.0 U
	3/6/2013	18	5.0 U	5.0 U	5.0 U
	6/3/2013	22	5.0 U	5.0 U	5.0 UJ
	9/10/2013	14	5.0 U	5.0 U	5.0 U
	12/10/2013	24	5.0 U	5.0 U	5.0 U
	3/28/2014	20	5.0 U	5.0 U	5.0 U
	6/25/2014	14	5.0 U	5.0 U	5.0 U
	9/23/2014	18	5.0 U	5.0 U	5.0 U
	12/16/2014	17	5.0 U	5.0 U	5.0 U
	4/8/2015	18	5.0 U	5.0 U	5.0 U
	7/21/2015	17	5.0 U	5.0 U	5.0 U
	10/6/2015	13	5.0 U	5.0 U	5.0 U
	1/27/2016	13	5.0 U	5.0 UJ	5.0 U
	4/25/2016	14	5.0 U	5.0 UJ	5.0 U
	7/27/2016	5.0 U	5.0 U	5.0 U	5.0 U
	11/17/2016	11	5.0 U	5.0 U	5.0 U
	2/8/2017	12	5.0 U	5.0 U	5.0 U
	4/24/2017	9.4	5.0 U	5.0 U	5.0 U
	7/26/2017	9.5	5.0 U	5.0 U	5.0 U
	11/8/2017	7.1	5.0 U	5.0 U	5.0 U
	2/6/2018	12.0	0.50 U	0.50 U	0.50 U
	4/17/2018	11.0	0.50 U	0.50 U	0.50 U
	7/25/2018	16.0	1.0 U	1.0 U	1.0 U
	10/24/2018	13.0	1.0 U	1.0 U	1.0 U
	5/28/2019	13.0	1.0 U	1.0 U	1.0 U
	9/3/2019	8.9	1.0 U	1.0 U	1.0 U
	11/20/2019	11.0	0.5 U	0.5 U	0.5 U
	3/4/2020	6.9	1.0 U	1.0 U	1.0 U
	6/2/2020	6.2	1.0 U	1.0 U	1.0 U
	8/24/2020	2.9	1.0 U	1.0 U	1.0 U
	12/15/2020	6.6	0.50 U	0.50 U	0.50 UJ
	3/23/2021	5.1	1.0 U	1.0 U	1.0 U
	6/22/2021	3.5 J	0.50 U	0.50 U	0.50 U
	9/21/2021	5.1	1.0 U	1.0 U	1.0 U
	12/7/2021	5.3	1.0 U	1.0 U	1.0 U
	3/22/2022	3.0	1.0 UJ	1.0 U	1.0 UJ
	6/21/2022	1.4	1.0 U	1.0 U	1.0 U
	9/20/2022	3.8	1.0 U	1.0 U	1.0 U
	12/6/2022	5.2 J	1.0 U	1.0 U	1.0 U

TABLE C-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
WEST HIGHWAY 6 AND HIGHWAY 281 SITE
HASTINGS, NEBRASKA

Sample Location	Sample Date	Analyte (µg/L)			
		PCE	TCE	1,1,1-TCA	1,1-DCE
MCL		5	5	200	7
Recovery Well # 3 & 4	10/21/2005	2,200	1.0 U	80	39 J
	7/20/2006	2,200	50 U	56	32
Recovery Well # 3	10/18/2006	3,500	5.0 U	61	47
	3/23/2007	570	5.0 U	30	19
	8/14/2007	2,300	5.0 U	28	19
	11/5/2008	210	5.0 U	5.0 U	5.0 U
	3/24/2009	190	5.0 U	5.0 U	5.0 U
	7/9/2009	110	5.0 U	5.0 U	5.0 U
	10/27/2009	170	5.0 U	5.0 U	5.0 U
	1/5/2010	78	5.0 U	5.0 U	5.0 U
	4/28/2010	120	5.0 U	5.0 U	5.0 U
	8/3/2010	45	5.0 U	5.0 U	5.0 U
	10/26/2010	34	5.0 U	5.0 UJ	5.0 U
	1/24/2011	40	5.0 U	5.0 U	5.0 U
	4/19/2011	50	5.0 U	5.0 U	5.0 U
	7/19/2011	36	5.0 U	5.0 U	5.0 U
	3/12/2012	36	1.0 U	2.4	2.9
	6/11/2012	44 J	5.0 UJ	5.0 U	5.0 U
	9/17/2012	29	5.0 U	5.0 U	5.0 U
	12/4/2012	69	5.0 U	5.0 U	5.0 U
	3/6/2013	53 J	5.0 UJ	5.0 UJ	5.0 UJ
	6/3/2013	34	5.0 U	5.0 U	5.0 UJ
	9/10/2013	38	5.0 U	5.0 U	5.0 U
	12/10/2013	27	5.0 U	5.0 U	5.0 U
	3/28/2014	19	5.0 U	5.0 U	5.0 U
	6/25/2014	24	5.0 U	5.0 U	5.0 U
	9/23/2014	13	5.0 U	5.0 U	5.0 U
	12/17/2014	8.9	5.0 U	5.0 U	5.0 U
	4/8/2015	9.8	5.0 U	5.0 U	5.0 U
	7/21/2015	21	5.0 U	5.0 U	5.0 U
	10/6/2015	24	5.0 U	5.0 U	1.5
	1/27/2016	17	5.0 U	5.0 UJ	5.0 U
	4/25/2016	20	5.0 U	5.0 U	5.0 U
	7/27/2016	16	5.0 U	5.0 U	5.0 U
	11/17/2016	14	5.0 U	5.0 U	5.0 U
	2/8/2017	15	5.0 U	5.0 U	5.0 U
	4/24/2017	35	5.0 U	5.0 U	5.0 U
	7/26/2017	12	5.0 U	5.0 U	5.0 U
	11/8/2017	9	5.0 U	5.0 U	5.0 U
	2/6/2018	12	0.50 U	1.4	2.7
	4/17/2018	1	0.50 U	1.5	3
	7/25/2018	7	1.0 U	1.2	2.6
	10/24/2018	4	1.0 U	1.0 U	1.7
	5/28/2019	240	1.0 U	1.0 U	1.0 U
	9/3/2019	8	1.0 U	1.0 U	1.2
	11/20/2019	7	0.50 U	0.68	1.7
	3/4/2020	8	1.0 U	1.0 U	1.1
	6/2/2020	7	1.0 U	1.0 U	1.0 U
	8/24/2020	17.0	1.0 U	1.0 U	1.0 U
	12/15/2020	20.0	0.50 U	0.50 U	0.50 U
	3/23/2021	17.0	1.0 U	1.0 U	1.0 U
	6/22/2021	8.9 J	0.50 U	0.50 U	0.50 U
	9/21/2021	11.0	1.0 U	1.0 U	1.0 U
	12/7/2021	13.0	1.0 U	1.0 U	1.0 U
	3/22/2022	11.0	1.0 UJ	1.0 U	1.0 UJ
	6/21/2022	12.0	1.0 U	1.0 U	1.0 U
	9/20/2022	8.7	1.0 U	1.0 U	1.0 U
	12/6/2022	10.0	1.0 U	1.0 U	1.0 U

TABLE C-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
WEST HIGHWAY 6 AND HIGHWAY 281 SITE
HASTINGS, NEBRASKA

Sample Location	Sample Date	Analyte (µg/L)			
		PCE	TCE	1,1,1-TCA	1,1-DCE
MCL		5	5	200	7
Recovery Well # 4	10/18/2006	200	5.0 U	92	33
	3/23/2007	46	5.0 U	26	14
	8/14/2007	72	50 U	28	14
	11/5/2008	19	5.0 U	12	7.1
	3/24/2009	14	5.0 U	5.0 U	5.0 U
	7/9/2009	13	5.0 U	5.0 U	5.0 U
	10/27/2009	10	5.0 U	8.5	5.1
	1/5/2010	9.7	5.0 U	5.2	5.0 U
	4/28/2010	9.2	5.0 U	5.0 UJ	5.0 U
	8/3/2010	7.5	5.0 U	5.6	5.0 U
	10/26/2010	6.2	5.0 U	5.0 UJ	5.0 U
	1/24/2011	5.0 U	5.0 U	5.0 U	5.0 U
	4/19/2011	5.6	5.0 U	5.0 U	5.0 U
	7/19/2011	5.6	5.0 U	5.0 U	5.0 U
	3/12/2012	2.9	1.0 U	3.5	4.3
	6/11/2012	10 UJ	10 U	10 UJ	10 U
	9/17/2012	5.0 U	5.0 U	5.0 U	5.0 U
	12/4/2012	5.0 U	5.0 U	5.0 U	5.0 U
	3/6/2013	5.0 U	5.0 U	5.0 U	5.0 U
	6/3/2013	5.0 U	5.0 U	5.0 U	5.0 UJ
	9/10/2013	5.0 U	5.0 U	5.0 U	5.0 U
	12/10/2013	5.0 U	5.0 U	5.0 U	5.0 U
	3/28/2014	5.0 U	5.0 U	5.0 U	5.0 U
	6/25/2014	5.0 U	5.0 U	5.0 U	5.3
	9/23/2014	5.0 U	5.0 U	5.0 U	5.6
	12/16/2014	5.0 U	5.0 U	5.0 U	5.4
	4/8/2015	5.0 U	5.0 U	5.0 U	5.3
	7/21/2015	5.0 U	5.0 U	5.0 U	5.2
	10/6/2015	1.1	3.0	5.0 U	4.8
	1/27/2016	5.0 U	5.0 U	5.0 U	5.0 U
	4/25/2016	5.0 U	5.0 U	5.0 U	5.0 U
	7/27/2016	5.0 U	5.0 U	5.0 U	5.0 U
	11/17/2016	5.0 U	5.0 U	5.0 U	5.0 U
	2/8/2017	8.6	5.0 U	5.0 U	5.0 U
	4/24/2017	490 J	5.0 U	8.6	5.0 U
	7/26/2017	5.0 U	5.0 U	5.0 U	5.0 U
	11/8/2017	5.0 U	5.0 U	5.0 U	5.0 U
	2/6/2018	30.0	0.50 U	0.50 U	0.50 U
	4/17/2018	0.8	0.50 U	1.6	3.1
	7/25/2018	1.0 U	1.0 U	1.3	2
	10/24/2018	1.0 U	1.0 U	1.5	2.9
	5/28/2019	1.0 U	1.0 U	1.0 U	1.0 U
	9/3/2019	2.2	1.0 U	1.0 U	1.9
	11/20/2019	0.5 U	0.5 U	0.5 U	0.5 U
	3/4/2020	7.8	1.0 U	1.0 U	1.0 U
	6/2/2020	1.5	1.0 U	1.0 U	1.1
	8/24/2020	1.2	1.0 U	1.0 U	1.4
	12/15/2020	1.6	0.50 U	0.84	2.0
	3/23/2021	1.1	1.0 U	1.0 U	1.0
	6/22/2021	0.73 J	0.50 U	0.54	1.1
	9/21/2021	1.0	1.0 U	1.0 U	1.2
	12/7/2021	1.1	1.0 U	1.0 U	1.3
	3/22/2022	1.0 U	1.0 UJ	1.0 U	1.0 UJ
	6/21/2022	1.0 U	1.0 U	1.0 U	1.2
	9/20/2022	1.0	1.0 U	1.0 U	1.0 U
	12/6/2022	1.1	1.0 U	1.0 U	1.1

TABLE C-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
WEST HIGHWAY 6 AND HIGHWAY 281 SITE
HASTINGS, NEBRASKA

Sample Location	Sample Date	Analyte (µg/L)			
		PCE	TCE	1,1,1-TCA	1,1-DCE
MCL		5	5	200	7
Air Stripper - Influent	3/23/2007	220	5.0 U	8.6	5.0 U
	4/30/2007	810	5.0 U	54 J	35 J
	8/14/2007	2,200	5.0 U	12	6.1
	11/5/2008	630	5.0 U	5.0 U	5.0 U
	3/24/2009	640	5.0 U	5.0 U	5.0 U
	7/9/2009	650	5.0 U	5.0 U	5.0 U
	10/27/2009	590	5.0 U	5.0 U	5.0 U
	1/5/2010	520	5.0 U	5.0 U	5.0 U
	4/28/2010	500	5.0 U	5.0 U	5.0 U
	8/3/2010	520	5.0 U	5.0 U	5.0 U
	10/26/2010	490	5.0 U	5.0 UJ	5.0 U
	1/25/2011	110	5.0 U	5.0 U	5.0 U
	4/19/2011	550	5.0 U	5.0 U	5.0 U
	7/19/2011	500	5.0 U	5.0 U	5.0 U
	3/12/2012	820	1.0 U	1	1.2
	6/11/2012	320 J	10 U	10 UJ	10 U
	9/17/2012	360	5.0 U	5.0 U	5.0 U
	12/4/2012	390	5.0 U	5.0 U	5.0 U
	3/6/2013	170	5.0 U	5.0 U	5.0 U
	6/3/2013	380	5.0 U	5.0 U	5.0 U
	9/10/2013	16	5.0 U	5.0 U	5.0 U
	12/10/2013	370	5.0 U	5.0 U	5.0 U
	3/28/2014	630	5.0 U	5.0 U	5.0 U
	6/25/2014	380	5.0 U	5.0 U	5.0 U
	9/23/2014	330	5.0 U	5.0 U	5.0 U
	12/16/2014	490	5.0 U	5.0 U	5.0 U
	4/8/2015	700	5.0 U	5.0 U	5.0 U
	7/21/2015	470	5.0 U	5.0 U	5.0 U
	10/6/2015	370	5.0 U	5.0 U	1.4
	1/27/2016	400	5.0 U	5.0 UJ	5.0 U
	4/25/2016	500	5.0 U	5.0 U	5.0 U
	7/27/2016	350	5.0 U	5.0 U	5.0 U
	11/17/2016	470	5.0 U	5.0 U	5.0 U
	2/8/2017	340	5.0 U	5.0 U	5.0 U
	4/24/2017	370	5.0 U	5.0 U	5.0 U
	7/26/2017	340	5.0 U	5.0 U	5.0 U
	11/8/2017	29	5.0 U	5.0 U	5.0 U
	2/6/2018	720	2.5 U	2.5 U	2.5 U
	4/17/2018	370	25 U	25 U	25 U
	7/25/2018	460	1.0 U	1.0 U	1
	10/24/2018	460	1.0 U	1.0 U	1.0 U
	5/28/2019	520	1.0 U	1.0 U	1.0 U
	9/3/2019	290	1.0 U	1.0 U	1.0 U
	11/20/2019	290	0.5 U	0.5 U	1.1
	3/4/2020	240	1.0 U	1.0 U	1.0 U
	6/2/2020	220	1.0 U	1.0 U	1.0 U
	8/24/2020	240	1.0 U	1.0 U	1.0 U
	12/15/2020	300	0.5 U	0.5 U	0.59
	3/23/2021	220	1.0 U	1.0 U	1.0 U
	6/22/2021	130 J	0.50 U	0.50 U	0.50 U
	9/21/2021	180	2.0 U	2.0 U	2.0 U
	12/7/2021	200	1.0 U	1.0 U	1.0 U
	3/22/2022	180	1.0 UJ	1.0 U	1.0 UJ
	6/21/2022	150	1.0 U	1.0 U	1.0 U
	9/20/2022	300	1.0 U	1.0 U	1.0 U
	12/6/2022	360	1.0 U	1.0 U	1.0 U

TABLE C-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
WEST HIGHWAY 6 AND HIGHWAY 281 SITE
HASTINGS, NEBRASKA

Sample Location	Sample Date	Analyte (µg/L)			
		PCE	TCE	1,1,1-TCA	1,1-DCE
MCL		5	5	200	7
Air Stripper - Effluent	3/23/2007	0.50 U	0.50 U	0.50 U	0.50 U
	4/30/2007	0.50 U	0.50 U	0.50 U	0.50 U
	8/14/2007	1.0 U	1.0 U	1.0 U	1.0 U
	11/5/2008	0.17 UJ	0.12 UJ	1.0 U	1.0 U
	3/24/2009	0.17 UJ	0.12 UJ	0.21 UJ	0.22 UJ
	7/9/2009	1.0 U	1.0 U	1.0 U	1.0 U
	10/27/2009	1.0 U	1.0 U	1.0 U	1.0 U
	1/5/2010	1.0 U	1.0 U	1.0 U	1.0 U
	4/28/2010	1.0 U	1.0 U	1.0 U	1.0 U
	8/3/2010	1.0 U	1.0 U	1.0 U	1.0 U
	10/26/2010	1.0 U	1.0 U	1.0 U	1.0 U
	1/24/2011	0.5 U	0.5 U	0.5 U	0.5 U
	4/19/2011	1.0 U	1.0 U	1.0 U	1.0 U
	7/19/2011	1.0 U	1.0 U	1.0 U	1.0 U
	3/12/2012	1.0 U	1.0 U	1.0 U	1.0 U
	6/11/2012	1.0 U	1.0 U	1.0 U	1.0 U
	9/17/2012	1.0 U	1.0 U	1.0 U	1.0 U
	12/4/2012	1.0 U	1.0 U	1.0 U	1.0 U
	3/6/2013	1.0 U	1.0 U	1.0 U	1.0 U
	6/3/2013	1.0 U	1.0 U	1.0 U	1.0 U
	9/10/2013	1.0 U	1.0 U	1.0 U	1.0 U
	12/10/2013	1.0 U	1.0 U	1.0 U	1.0 U
	3/28/2014	1.0 U	1.0 U	1.0 U	1.0 U
	6/25/2014	1.0 U	1.0 U	1.0 U	1.0 U
	9/23/2014	1.0 U	1.0 U	1.0 U	1.0 U
	12/16/2014	1.0 U	1.0 U	1.0 U	1.0 U
	4/8/2015	1.0 U	1.0 U	1.0 U	1.0 U
	7/21/2015	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
	10/6/2015	1.0 U	1.0 U	1.0 U	1.0 U
	1/27/2016	1.0 U	1.0 U	1.0 U	1.0 U
	4/25/2016	1.0 U	1.0 U	1.0 U	1.0 U
	7/27/2016	1.0 U	1.0 U	1.0 U	1.0 U
	11/17/2016	0.5 U	0.5 U	0.5 U	0.5 U
	2/8/2017	1.0 U	1.0 U	1.0 U	1.0 U
	4/24/2017	1.0 U	1.0 U	1.0 U	1.0 U
	7/26/2017	1.0 U	1.0 U	1.0 U	1.0 U
	11/8/2017	1.0 U	1.0 U	1.0 U	1.0 U
	2/6/2018	0.50 U	0.50 U	0.50 U	0.50 U
	4/17/2018	0.50 U	0.50 U	0.50 U	0.50 U
	7/25/2018	1.0 U	1.0 U	1.0 U	1.0 U
	10/24/2018	1.0 U	1.0 U	1.0 U	1.0 U
	5/28/2019	1.0 U	1.0 U	1.0 U	1.0 U
	9/3/2019	1.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	2	0.5 U	1.1	2.5
	3/4/2020	1.0 U	1.0 U	1.0 U	1.0 U
	6/2/2020	1.0 U	1.0 U	1.0 U	1.0 U
	8/24/2020	1.0 U	1.0 U	1.0 U	1.0 U
	12/15/2020	0.5 U	0.5 U	0.5 U	0.5 U
	3/23/2021	1.0 U	1.0 U	1.0 U	1.0 U
	6/22/2021	0.50 J	0.50 U	0.50 U	0.50 U
	9/21/2021	1.0 U	1.0 U	1.0 U	1.0 U
	12/7/2021	1.0 U	1.0 U	1.0 U	1.0 U
	3/22/2022	1.0 U	1.0 UJ	1.0 U	1.0 UJ
	6/21/2022	1.0 U	1.0 U	1.0 U	1.0 U
	9/20/2022	1.0 U	1.0 U	1.0 U	1.0 U
	12/6/2022	1.0 U	1.0 U	1.0 U	1.0 U

TABLE C-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
WEST HIGHWAY 6 AND HIGHWAY 281 SITE
HASTINGS, NEBRASKA

Notes:

Recovery Wells # 3 and # 4 were originally plumbed together for discharge; therefore, only a combined sample could be collected. A sample spigot was installed on Recovery Well # 4 in October 2006, so representative samples could be collected from both Recovery Well # 3 and Recovery Well # 4.

DCE	Dichloroethene
J	Estimated value
MCL	Maximum contaminant level
NS	No sample collected; recovery well was not in operation during sampling event
PCE	Tetrachloroethene
TCE	Trichloroethene
TCA	Trichloroethane
U	Analyte not detected above the reporting limit
UJ	Analyte was not detected at or above the reporting limit and the reporting limit was an estimate
µg/L	Micrograms per liter

TABLE C-2

HISTORICAL SVE SYSTEM PCE RESULTS
WEST HIGHWAY 6 AND HIGHWAY 281 SITE
HASTINGS, NEBRASKA

Sample Date	Sample Location and PCE Result (analytical results are in micrograms per cubic meter)							
	SVE-1	SVE-2	SVE-3	SVE-4	SVE-5	SVE-6	Combined Influent	System Effluent
7/20/2006	NA	540,000	380,000	NA	480,000	36,000	200,000	10,000
8/30/2006	255,000	132,000	119,000	75,000	134,000	25,500	112,000	11,000
9/28/2006	812,000 J	618,000 J	486,000 J	151,000 J	565,000 J	31,800 J	360,000 J	27,800 J
10/26/2006	1,176,000	732,000	684,000	132,000	685,000	14,200	307,000	8,420
11/29/2006	957,000	444,000	420,000	494,000	398,000	12,700	877,000	244,000
1/3/2007	5,100	278,000	288,000	609,000	113,000	7,600	94,400	10,000
3/15/2007	657	113,000	110,000	32,500	14,900	1,450	*	60,600
4/30/2007	711	107,000	114,000	83,900	1,540	1,310	*	31,800
8/14/2007	819	136,000	96,100	40,500	1,210	830	*	33,000
6/11/2008	1,220	61,300	38,800	1,210	1,510	1,150	*	24,000
2/24/2009	NS	NS	NS	NS	NS	NS	*	10,100
3/24/2009	1,190	15,600	4,210	5,520	740	321	*	3,670
4/22/2009	NS	NS	NS	NS	NS	NS	*	7,570
5/20/2009	NS	NS	NS	NS	NS	NS	*	8,860
7/9/2009	1,180	11,200	4,900	2,070	689	2,490	*	535
7/22/2009	NS	NS	NS	NS	NS	NS	*	2,470
8/18/2009	NS	NS	NS	NS	NS	NS	*	3,240
9/24/2009	NS	NS	NS	NS	NS	NS	*	1,420
10/27/2009	1,870	4,240	1,990	1,090	557	221	*	1,790
11/20/2009	NS	NS	NS	NS	NS	NS	*	910
1/6/2010	160	3,240	975	33.9 U	376	277	*	1,680
2/24/2010	NS	NS	NS	NS	NS	NS	*	1,830
3/24/2010	NS	NS	NS	NS	NS	NS	*	1,120
4/28/2010	574	3,280	894	16.9	424	215	*	1,260
5/25/2010	NS	NS	NS	NS	NS	NS	*	1,800
6/23/2010	NS	NS	NS	NS	NS	NS	*	802
8/4/2010	1,050	2,450	1,570	NA	641	144	*	1,480
9/23/2010	NS	NS	NS	NS	NS	NS	*	1,340
10/26/2010	1,170	2,160	310	119	422	321	*	1,910
11/18/2010	NS	NS	NS	NS	NS	NS	*	702
12/13/2010	NS	NS	NS	NS	NS	NS	*	743
1/24/2011	147	991	701	938	403	167	*	793
2/23/2011	NS	NS	NS	NS	NS	NS	*	995 J
3/22/2011	NS	NS	NS	NS	NS	NS	*	866
4/19/2011	30.6	846	447	NA	460	132	*	766
5/23/2011	NS	NS	NS	NS	NS	NS	*	433 J
6/21/2011	NS	NS	NS	NS	NS	NS	*	767
7/19/2011	120	5,100	2,600	640	1,300	350	*	3,500
8/23/2011	NS	NS	NS	NS	NS	NS	*	1,000
9/20/2011	NS	NS	NS	NS	NS	NS	*	453
3/12/2012	79	4,800	520	NS	790	250	*	1,700
6/11-12/2012	33.9 U	1,340	390	NS	302	139	*	468
9/17/2012	250	8,400	2,600	NS	2,300	420	*	6,000
12/4&10/2012	80	1,000	450	NS	370	100	*	710
3/6/2013	420	1,800	430	55	470	130	*	390
6/3/2013	NS	2,700	630	NS	550	160	*	1,100
9/9/2013	2,300	2,200	860	1,300	740	160	*	940
12/10/2013	200	2,100	590	NS	440	120	*	1,200
3/26/2014	NS	2,500	480	NS	120	1,300	*	1.4 U
6/24/2014	420	2,100	610 J	NS	460	170	*	1,300
9/23&25/2014	NS	2,100	510	NS	280	91	*	1,300
12/16&17/2014	NS	4,200	330	NS	310	140	*	1,200
4/8/2015	NS	2,600	530	NS	240	130	*	1,200
7/22/2015	NS	3,500	600	NS	390	120	*	990
10/6&9/2015	NS	1,500	330	NS	NS	NS	*	530
1/27/2016	3	1,900	320	NS	220 J	110	*	660
4/25/2016	9	2,400	480	NS	240	120	*	830

TABLE C-2

HISTORICAL SVE SYSTEM PCE RESULTS
WEST HIGHWAY 6 AND HIGHWAY 281 SITE
HASTINGS, NEBRASKA

Sample Date	Sample Location and PCE Result (analytical results are in micrograms per cubic meter)							
	SVE-1	SVE-2	SVE-3	SVE-4	SVE-5	SVE-6	Combined Influent	System Effluent
7/27/2016	150	340	670	NS	600	120	*	250
11/17/2016	NS	1,180	1,410	818	56	81	*	529
2/8/2017	14	840	1,200	170	NS	6,100	*	1,600
4/24/2017	2,600	3,000	1,100	1,200	180	4,100	*	1,100
7/26/2017	3,400	2,200	150	1,400	360	4,100	*	1,400
11/6/2017	2,400	1,400	280	630	96	3,100	*	1,000
2/6/2018	38	38 J	130	99	58	4,900	*	1,300
4/17/2018	1,200	1,000	350	530	380	3,700	*	230
7/25/2018	1,300	2,900	1,200	1,700	290	2,700	*	1,000
10/24/2018	4,000	2,200	330	2,700	230	2,900	*	570
5/28/2019	2,900	1,100	160	360	160	4,400	*	400 J
9/3/2019	1,500	660	240	510	14	35	*	360
11/20/2019	1,900	690	150	610	63	170	*	310
3/4/2020	6,000	8,900	9,100	11,000	480	490	*	1,200
6/2/2020	510	19	440	950	68	71	*	370
8/24/2020	810	38	200	1,200	100	54	*	560
12/14/2020	210	84	110	150	88	77	*	310
3/22/2021	520	120	1,300	850	120	110	*	440
6/21/2021	730	62	630	450	110	52	*	490
9/20/2021	780	31	780	98	92	69	*	490
12/6/2021	840 J	72	940 J	610	72	80	*	600 J
3/21/2022	62	80	1,500	62	2,100	2,100	*	440
6/20/2022	100	41	690	49	4,600	2,000	*	540
9/19/2022	180	42	260	69	7,600	7,600	*	320
12/5/2022	130	38	510	43	9,800	8,000	*	610

Notes:

*	The catalytic oxidation treatment unit was taken off-line in February 2007; therefore, a combined influent (i.e., pre-treatment vapor stream) sample location no longer exists.
J	Estimated concentration
NA	Not analyzed due to water in Summa canister
NS	Not sampled
PCE	Tetrachloroethene
U	Analyte not detected above reporting limit

APPENDIX D

GROUNDWATER MASS REMOVAL DATA FOR TETRACHLOROETHENE

APPENDIX D

GROUNDWATER MASS REMOVAL DATA FOR TETRACHLOROETHENE
WEST HIGHWAY 6 AND HIGHWAY 281 SITE
HASTINGS, NEBRASKA

Date	Combined Influent Concentration (µg/L)	Flow Rate (gpm)[1]	PCE Emission (µg/s)	PCE Emission (lb/hr)[2]	Hours of Operation for Sampling Period[3]	PCE Emission (pounds/sample period)
3/23/2007	220	31.2	433.33	0.003	*	*
4/30/2007	810	24.8	1,268.18	0.010	912	9.1701
8/14/2007	2,200	31.6	4,388.89	0.035	2,544	88.5257
11/5/2008	633	28.6	1,142.92	0.009	10,586	95.9277
3/24/2009	640	28.3	1,143.43	0.009	3,336	30.2437
7/9/2009	650	27.5	1,128.47	0.009	2,568	22.9765
10/27/2009	590	24.8	923.74	0.007	1,920	14.0620
1/5/2010	520	23.4	768.18	0.006	1,680	10.2322
4/28/2010	500	24.3	767.05	0.006	2,712	16.4933
8/3/2010	520	24.1	791.16	0.006	2,352	14.7537
10/26/2010	490	22.9	708.40	0.006	2,016	11.3231
1/25/2011[5]	110	24	166.67	0.001	840	1.1100
4/19/2011[5]	550	24.6	854.17	0.007	1,464	9.9147
7/19/2011	500	25.4	801.77	0.006	2,184	13.8835
3/12/2012[6]	820	27.5	1,423.61	0.011	3,480	39.2797
6/11/2012	320 J	28.7	579.80	0.005	2,184	10.0398
9/17/2012	360	28.7	652.27	0.005	2,352	12.1637
12/4/2012	390	25	615.53	0.005	1,872	9.1359
3/6/2013[7]	170	26	279.04	0.002	2,208	4.8850
6/3/2013	380	23	551.77	0.004	2,136	9.3445
9/10/2013[8]	16	18	18.18	0.000	2,376	0.3425
12/10/2013	370	17	397.10	0.003	2,184	6.8762
3/28/2014	630	16.6	660.23	0.005	2,592	13.5683
6/25/2014	380	16.4	393.43	0.003	2,136	6.6630
9/23/2014	330	16.6	345.83	0.003	2,184	5.9885
12/17/2014	490	15.8	488.76	0.004	2,040	7.9054
4/8/2015	700	15.8	698.23	0.006	2,712	15.0137
7/21/2015	470	15.2	451.01	0.004	2,496	8.9254
10/6/2015	370	14.9	348.04	0.003	1,824	5.0333
1/27/2016	400	14.4	363.64	0.003	2,712	7.8191
4/25/2016	500	14.1	445.08	0.004	2,136	7.5376
7/27/2016	350	15.3	338.07	0.003	2,232	5.9827
11/17/2016	470	12.9	382.77	0.003	2,712	8.2304
2/8/2017	340	12.9	276.89	0.002	1,996	4.3820
4/24/2017	370 J	9.8	228.91	0.002	1,801	3.2688
7/26/2017	340	9.27	198.98	0.002	2,232	3.5212
11/8/2017	29	17	31.12	0.000	2,520	0.6219
2/6/2018	720	16.99	772.27	0.006	2,153	13.1829
4/17/2018	370	16.06	375.14	0.003	1,680	4.9969
7/25/2018	460	17.27	501.53	0.004	2,352	9.3526

APPENDIX D

GROUNDWATER MASS REMOVAL DATA FOR TETRACHLOROETHENE
WEST HIGHWAY 6 AND HIGHWAY 281 SITE
HASTINGS, NEBRASKA

Date	Combined Influent Concentration (µg/L)	Flow Rate (gpm)[1]	PCE Emission (µg/s)	PCE Emission (lb/hr)[2]	Hours of Operation for Sampling Period[3]	PCE Emission (pounds/sample period)
10/24/2018	460	19.47	565.42	0.004	2,184	9.7908
5/28/2019	520	18.04	592.22	0.005	5,184	24.3415
9/3/2019	290	17.11	313.25	0.002	2,352	5.8415
11/20/2019	290	17.23	315.45	0.003	1,872	4.6820
3/4/2020	240	17.35	262.88	0.002	2,520	5.2524
6/2/2020	220	17.2	238.89	0.002	2,160	4.0912
8/24/2020	240	20.19	305.91	0.002	1,992	4.8315
12/15/2020	300	16.99	321.78	0.003	2,712	6.9191
3/23/2021	220	16.41	227.92	0.002	2,352	4.2502
6/22/2021	130 J	16.44	134.92	0.001	2,184	2.3364
9/21/2021	180	16.01	181.93	0.001	2,184	3.1504
12/7/2021	200	15.57	196.59	0.002	1,848	2.8805
3/22/2022	180	15.15	172.16	0.001	2,520	3.4398
6/21/2022	150	14.31	135.51	0.001	2,184	2.3465
9/20/2022	300	14.67	277.84	0.002	2,184	4.8111
12/6/2022	360	13.88	315.45	0.003	1,848	4.6221
				Estimated pounds of PCE removed per 12-month period[4]		**32.52**
				Estimated pounds of PCE removed since system start-up on 3/23/07		**656.26**

Notes:

*	No value – system startup
1	Total influent flow rate derived from sum of flow meter readings from individual wells.
2	Assumes 99.9% destruction.
3	Assumes full-time operation of all wells for each sample period, unless otherwise noted in "Date" column.
4	Based on data from January 2010 through the present. Emission of a single hazardous air pollutant (PCE) is not to exceed 2.5 tons per year.
5	System shut down from 12/1/10 through 2/17/11 due to high water level in pond.
6	System shut down from 11/23/11 through 2/22/12 due to high water level in pond.
7	System shut down from 12/4/12 through 3/1/13 due to high water level in pond.
8	Recovery Well #1 not in operation during sampling event, resulting in lower combined influent concentration.
gpm	Gallons per minute
J	Estimated value
lb/hr	Pounds per hour
PCE	Tetrachloroethene
µg/L	Micrograms per liter
µg/s	Micrograms per second

APPENDIX E

SVE SYSTEM MASS REMOVAL DATA FOR TETRACHLOROETHENE

APPENDIX E

SVE SYSTEM MASS REMOVAL DATA FOR TETRACHLOROETHENE
WEST HIGHWAY 6 AND HIGHWAY 281 SITE
HASTINGS, NEBRASKA

Date	Combined Effluent PCE Concentrations (mg/m^3)	PCE Concentrations ($lb\ PCE/m^3$)	Flow Rate From Point A (ft^3/min)	Flow Rate From Point A (m^3/min)	Effluent Rate (lb PCE/hr)	Hours of Operation for Sampling Period[1]	Actual Emission Rate (pounds PCE/sample period)
3/25/2005	3.3	0.000007	*	*	0.0030	726	2.1780
4/27/2005	17.0	0.000037	*	*	0.0290	530	15.3700
5/19/2005	11.0	0.000024	*	*	0.0180	653	11.7540
6/22/2005	6.0	0.000013	*	*	0.0100	550	5.5000
7/16/2005	13.3	0.000029	*	*	0.0220	385	8.4700
8/17/2005	6.3	0.000014	*	*	0.0110	513	5.6430
9/19/2005	8.1	0.000018	*	*	0.0140	583	8.1620
10/18/2005	8.4	0.000019	*	*	0.0140	704	9.8560
12/24/2005	5.0	0.000011	*	*	0.0090	337	3.0330
1/17/2006	4.7	0.000010	*	*	0.0080	413	3.3040
2/16/2006	6.2	0.000014	*	*	0.0110	613	6.7430
7/20/2006	10	0.000022	*	*	0.0170	72	1.2240
8/30/2006	11	0.000024	*	*	0.0190	984	18.6960
9/28/2006	27.8	0.000061	*	*	0.0470	696	32.7120
10/26/2006	8.42	0.000019	*	*	0.0140	672	9.4080
11/29/2006	244	0.000538	*	*	0.4120	816	336.1920
1/3/2007	10	0.000022	*	*	0.0170	840	14.2800
3/12/2007	60.6	0.000134	335	9.48	0.0760	168	12.7697
4/30/2007	31.8	0.000070	333	9.42	0.0396	1,176	46.5905
8/14/2007	33	0.000073	346	9.79	0.0427	2,544	108.6877
6/11/2008	24	0.000053	329	9.31	0.0296	7,248	214.1925
2/24/2009	10.1	0.000022	362	10.24	0.0137	5,856	80.1485
3/24/2009	3.67	0.000008	362	10.24	0.0050	672	3.3420
4/22/2009	7.57	0.000017	359	10.16	0.0102	696	7.0805
5/20/2009	8.86	0.000020	358	10.13	0.0119	672	7.9790
7/9/2009	0.535	0.000001	347	9.82	0.0007	1,200	0.8339
7/22/2009	2.47	0.000005	348	9.85	0.0032	312	1.0039
8/18/2009	3.24	0.000007	354	10.02	0.0043	648	2.7822
9/24/2009	1.42	0.000003	353	9.99	0.0019	888	1.6663
10/27/2009	1.79	0.000004	375	10.61	0.0025	792	1.9901
11/2/2009	0.91	0.000002	374	10.58	0.0013	576	0.7338
1/6/2010	1.68	0.000004	390	11.04	0.0025	1,128	2.7666
2/24/2010	1.83	0.000004	375	10.61	0.0026	1,176	3.0210
3/24/2010	1.12	0.000002	385	10.90	0.0016	672	1.0847
4/28/2010	1.26	0.000003	359	10.16	0.0017	840	1.4224
5/25/2010	1.8	0.000004	359	10.16	0.0024	672	1.6256
6/23/2010	0.802	0.000002	351	9.93	0.0011	696	0.7334
8/3/2010	1.48	0.000003	354	10.02	0.0020	984	1.9299
9/23/2010	1.34	0.000003	322	9.11	0.0016	1,224	1.9770
10/25/2010	1.91	0.000004	326	9.23	0.0023	768	1.7901
11/18/2010	0.702	0.000002	336	9.51	0.0009	576	0.5086
12/13/2010	0.743	0.000002	329	9.31	0.0009	600	0.5490
1/24/2011	0.793	0.000002	335	9.48	0.0010	1,008	1.0024
2/23/2011	0.995	0.000002	335	9.48	0.0012	720	0.8984
3/22/2011	0.866	0.000002	348	9.85	0.0011	648	0.7310
4/19/2011	0.766	0.000002	342	9.68	0.0010	672	0.6590
5/23/2011	0.433	0.000001	344	9.74	0.0006	816	0.4550
6/21/2011	0.767	0.000002	338	9.57	0.0010	696	0.6754
7/19/2011	3.5	0.000008	339	9.59	0.0044	672	2.9847
8/23/2011	1.0	0.000002	335	9.48	0.0013	840	1.0534
9/20/2011	0.453	0.000001	342	9.68	0.0006	672	0.3897
3/12/2012	1.7	0.000004	341	9.65	0.0022	4,176	9.0621
6/12/2012	0.468	0.000001	330	9.34	0.0006	2,208	1.2765
9/17/2012	6.0	0.000013	334	9.45	0.0075	2,328	17.4641

APPENDIX E

SVE SYSTEM MASS REMOVAL DATA FOR TETRACHLOROETHENE
WEST HIGHWAY 6 AND HIGHWAY 281 SITE
HASTINGS, NEBRASKA

Date	Combined Effluent PCE Concentrations (mg/m^3)	PCE Concentrations (lb PCE/m^3)	Flow Rate From Point A (ft^3/min)	Flow Rate From Point A (m^3/min)	Effluent Rate (lb PCE/hr)	Hours of Operation for Sampling Period[1]	Actual Emission Rate (pounds PCE/sample period)
12/10/2012	0.710	0.000002	352	9.96	0.0009	2,016	1.8861
3/6/2013	0.390	0.000001	355	10.05	0.0005	2,064	1.0701
6/3/2013	1.100	0.000002	338	9.57	0.0014	2,136	2.9729
9/9/2013	0.940	0.000002	353	9.99	0.0012	2,352	2.9215
12/10/2013	1.200	0.000003	344	9.74	0.0015	2,208	3.4120
6/24/2014	1.300	0.000003	356	10.07	0.0017	4,704	8.1494
9/25/2014	1.300	0.000003	357	10.10	0.0017	2,232	3.8777
12/16/2014	1.200	0.000003	372	10.53	0.0017	1,968	3.2886
4/8/2015	1.200	0.000003	367	10.39	0.0016	2,712	4.4710
7/22/2015	0.990	0.000002	366	10.36	0.0014	2,520	3.4181
10/9/2015	0.530	0.000001	361	10.22	0.0007	1,896	1.3580
1/27/2016	0.660	0.000001	379	10.73	0.0009	2,640	2.4720
4/25/2016	0.830	0.000002	365	10.33	0.0011	2,136	2.4225
7/27/2016	0.250	0.000001	384	10.87	0.0004	2,232	0.8021
11/17/2016	0.529	0.000001	377	10.67	0.0007	2,712	2.0247
2/8/2017	1.600	0.000004	373	10.56	0.0022	1,996	4.4592
4/24/2017	1.100	0.000002	379	10.73	0.0016	1,801	2.8107
7/26/2017	1.400	0.000003	378	10.70	0.0020	2,232	4.4216
11/6/2018	1.000	0.000002	379	10.73	0.0014	2,520	3.5752
2/8/2018	1.300	0.000003	376	10.64	0.0018	2,153	3.9395
4/17/2018	0.230	0.000001	381	10.78	0.0003	1,680	0.5511
7/25/2018	1.000	0.000002	387	10.95	0.0014	2,352	3.4073
10/24/2018	0.570	0.000001	370	10.47	0.0008	2,184	1.7242
5/28/2019	0.400	0.000001	353	9.99	0.0005	5,184	2.7401
9/3/2019	0.360	0.000001	373	10.56	0.0005	2,352	1.1823
11/20/2019	0.310	0.000001	382	10.81	0.0004	1,872	0.8298
3/4/2020	1.200	0.000003	398	11.26	0.0018	2,520	4.5054
6/2/2020	0.370	0.000001	370	10.47	0.0005	2,160	1.1069
8/24/2020	0.560	0.000001	343	9.71	0.0007	1,992	1.4323
12/14/2020	0.310	0.000001	340	9.62	0.0004	2,688	1.0606
3/22/2021	0.440	0.000001	357	10.10	0.0006	2,352	1.3830
6/21/2021	0.490	0.000001	336	9.51	0.0006	2,184	1.3460
9/20/2021	0.490	0.000001	335	9.48	0.0006	2,184	1.3420
12/6/2021	0.600	0.000001	356	10.07	0.0008	1,848	1.4776
3/21/2022	0.440	0.000001	357	10.10	0.0006	2,520	1.4818
6/20/2022	0.540	0.000001	355	10.05	0.0007	2,184	1.5673
9/19/2022	0.320	0.000001	353	9.99	0.0004	2,184	0.9235
12/5/2022	0.610	0.000001	365	10.33	0.0008	1,848	1.5402
					Estimated pounds of PCE removed per 12-month period[2]		**11.14**
					Estimated pounds of PCE removed since system start-up on 7/20/2006		**1,049.73**

Notes:

* Flow rates for this period were calculated using data from a post-treatment sampling location. The treatment system was removed in February 2007.

PCE influent rates from 3-25-05 to 2-16-06 were calculated from ERM data.
PCE influent rates from 7-20-06 to present were calculated from EPA data.

1 Assumes full-time operation for each sample period, unless otherwise noted.
2 Based on data from January 2010 through the present. Emission of a single hazardous air pollutant (PCE) is not to exceed 2.5 tons per year.

EPA	U.S. Environmental Protection Agency	m^3	Cubic meter
ERM	Environmental Resources Management	mg/m^3	Milligrams per cubic meter
ft^3	Cubic feet	min	Minute
hr	Hour	PCE	Tetrachloroethene
lb	Pound	SVE	Soil vapor extraction